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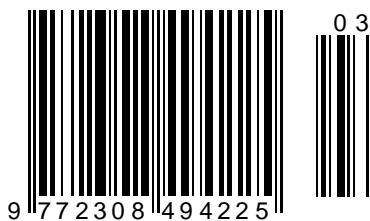
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Denis Chemezov
Vladimir Industrial College
M.Sc.Eng., Corresponding Member of International Academy of
Theoretical and Applied Sciences, Lecturer, Russian Federation
<https://orcid.org/0000-0002-2747-552X>
vic-science@yandex.ru

Anzhelika Bayakina
Vladimir Industrial College
Lecturer, Russian Federation

Egor Prozorov
Vladimir Industrial College
Student, Russian Federation

Elena Stepanova
Vladimir Industrial College
Lecturer, Russian Federation

Aleksey Fetisov
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«Security Navigator» LLC
Mechanic, Vladimir, Russian Federation

REFERENCE DATA OF PRESSURE DISTRIBUTION ON THE SURFACES OF AIRFOILS HAVING THE NAMES BEGINNING WITH THE LETTER G (THE SECOND PART)

Abstract: The results of the computer calculation of air flow around the airfoils having the names beginning with the letter G (continuation) are presented in the article. The contours of pressure distribution on the surfaces of

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the airfoils at the angles of attack of 0, 15 and -15 degrees in conditions of the subsonic airplane flight speed were obtained.

Key words: the airfoil, the angle of attack, pressure, the surface.

Language: English

Citation: Chemezov, D., et al. (2022). Reference data of pressure distribution on the surfaces of airfoils having the names beginning with the letter G (the second part). *ISJ Theoretical & Applied Science*, 03 (107), 901-984.

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Introduction

Creating reference materials that determine the most accurate pressure distribution on the airfoils surfaces is an actual task of the airplane aerodynamics.

Materials and methods

The study of air flow around the airfoils was carried out in a two-dimensional formulation by means of the computer calculation in the *Comsol Multiphysics* program. The airfoils in the cross section were taken as objects of research [1-19]. In this work,

the airfoils having the names beginning with the letter *G* were adopted. Air flow around the airfoils was carried out at the angles of attack (α) of 0, 15 and -15 degrees. The flight speed of the airplane in each case was subsonic. The airplane flight in the atmosphere was carried out under normal weather conditions. The geometric characteristics of the studied airfoils are presented in the Table 1. The geometric shapes of the airfoils in the cross section are presented in the Table 2.

Table 1. The geometric characteristics of the airfoils.

Airfoil name	Max. thickness	Max. camber	Leading edge radius	Trailing edge thickness
GOE 344 (PFALZ 71)	7.2% at 20.0% of the chord	2.71% at 40.0% of the chord	0.9858%	0.65%
GOE 346 (FRIEDRICHSHAFEN-STAAKEN)	5.74% at 40.0% of the chord	3.79% at 40.0% of the chord	0.8336%	0.35%
GOE 358	10.87% at 20.0% of the chord	5.69% at 50.0% of the chord	1.7859%	0.32%
GOE 359	7.8% at 30.0% of the chord	5.88% at 40.0% of the chord	0.7637%	0.15%
GOE 360	9.68% at 30.0% of the chord	5.86% at 30.0% of the chord	1.0559%	0.21%
GOE 361	6.8% at 20.0% of the chord	5.53% at 40.0% of the chord	0.7836%	0.0%
GOE 362	6.6% at 20.0% of the chord	5.29% at 40.0% of the chord	0.817%	0.0%
GOE 363	11.07% at 20.0% of the chord	5.71% at 40.0% of the chord	1.1665%	0.11%
GOE 364	10.8% at 30.0% of the chord	6.51% at 30.0% of the chord	1.4952%	0.0%
GOE 365	11.7% at 30.0% of the chord	5.14% at 40.0% of the chord	1.2843%	0.0%
GOE 366	13.14% at 30.0% of the chord	7.24% at 40.0% of the chord	2.0949%	0.3%
GOE 367	16.28% at 30.1% of the chord	4.59% at 40.1% of the chord	2.2776%	0.32%
GOE 368	7.71% at 15.0% of the chord	3.81% at 30.0% of the chord	0.6519%	0.0%
GOE 369	5.85% at 30.0% of the chord	5.45% at 40.0% of the chord	1.0264%	0.0%
GOE 370	4.65% at 20.0% of the chord	5.74% at 40.0% of the chord	0.5893%	0.0%
GOE 371	6.95% at 30.0% of the chord	4.61% at 40.0% of the chord	0.7646%	0.0%
GOE 372	6.2% at 30.0% of the chord	4.31% at 40.0% of the chord	0.7036%	0.0%
GOE 373	6.5% at 30.0% of the chord	5.07% at 40.0% of the chord	0.8293%	0.0%
GOE 374	6.45% at 30.0% of the chord	4.52% at 30.0% of the chord	0.6862%	0.0%
GOE 375	6.5% at 20.0% of the chord	4.48% at 30.0% of the chord	0.8317%	0.0%
GOE 376	6.6% at 30.0% of the chord	4.95% at 30.0% of the chord	0.8085%	0.0%
GOE 377	6.45% at 30.0% of the chord	3.89% at 40.0% of the chord	0.6471%	0.0%
GOE 379	6.45% at 30.0% of the chord	5.24% at 40.0% of the chord	0.5995%	0.0%
GOE 380	6.55% at 30.0% of the chord	5.6% at 30.0% of the chord	0.7142%	0.0%
GOE 381	6.38% at 30.0% of the chord	5.76% at 30.0% of the chord	0.6607%	0.16%
GOE 382	20.0% at 30.3% of the chord	5.98% at 40.2% of the chord	2.7117%	0.21%
GOE 383	20.14% at 30.5% of the chord	4.91% at 40.4% of the chord	4.1176%	0.32%
GOE 384	19.53% at 30.1% of the chord	6.83% at 40.1% of the chord	2.7606%	0.43%
GOE 385	9.89% at 30.0% of the chord	4.14% at 30.0% of the chord	0.9339%	0.42%
GOE 386	20.17% at 30.3% of the chord	5.4% at 40.3% of the chord	4.2208%	0.32%
GOE 387	14.85% at 30.0% of the chord	5.52% at 40.0% of the chord	2.3316%	0.0%
GOE 388	10.19% at 30.0% of the chord	5.43% at 40.0% of the chord	1.2692%	0.21%
GOE 389	10.31% at 30.0% of the chord	3.97% at 40.0% of the chord	0.9723%	0.21%
GOE 390	20.24% at 30.2% of the chord	6.88% at 40.1% of the chord	3.8427%	0.21%
GOE 391	5.1% at 40.0% of the chord	3.21% at 40.0% of the chord	0.5818%	0.0%
GOE 392	10.15% at 30.0% of the chord	4.84% at 40.0% of the chord	0.5911%	0.0%
GOE 393	6.07% at 20.0% of the chord	4.21% at 30.0% of the chord	0.9021%	0.13%
GOE 394	6.1% at 20.0% of the chord	5.88% at 40.0% of the chord	0.8856%	0.15%
GOE 395	6.11% at 20.0% of the chord	6.97% at 50.0% of the chord	0.9048%	0.15%

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GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

GOE 396	4.7% at 30.0% of the chord	5.77% at 40.0% of the chord	0.549%	0.0%
GOE 397	5.1% at 30.0% of the chord	3.96% at 40.0% of the chord	0.6581%	0.0%
GOE 398	13.85% at 30.0% of the chord	4.85% at 40.0% of the chord	1.9588%	0.0%
GOE 399	6.9% at 30.0% of the chord	4.22% at 40.0% of the chord	0.7201%	0.0%
GOE 400	6.12% at 20.0% of the chord	4.89% at 40.0% of the chord	0.8905%	0.08%
GOE 401	7.1% at 30.0% of the chord	4.86% at 30.0% of the chord	1.0286%	0.0%
GOE 402	6.8% at 20.0% of the chord	5.73% at 30.0% of the chord	0.7958%	0.0%
GOE 403	6.65% at 30.0% of the chord	4.32% at 40.0% of the chord	0.6692%	0.0%
GOE 404	13.16% at 30.0% of the chord	4.96% at 30.0% of the chord	2.6535%	0.16%
GOE 405	11.1% at 30.0% of the chord	6.54% at 40.0% of the chord	1.0156%	0.0%
GOE 406	11.69% at 30.0% of the chord	5.53% at 40.0% of the chord	1.6491%	0.0%
GOE 407	9.46% at 30.0% of the chord	4.78% at 40.0% of the chord	1.2507%	0.0%
GOE 408	7.75% at 30.0% of the chord	4.14% at 30.0% of the chord	0.8406%	0.0%
GOE 409	12.7% at 30.0% of the chord	0.0% at 0.0% of the chord	1.3835%	0.0%
GOE 410	16.1% at 30.0% of the chord	0.0% at 0.0% of the chord	2.5997%	0.0%
GOE 411	13.2% at 30.0% of the chord	0.0% at 0.0% of the chord	0.791%	0.0%
GOE 412	13.12% at 30.1% of the chord	5.1% at 40.0% of the chord	1.4844%	0.32%
GOE 413	16.35% at 30.0% of the chord	4.65% at 40.0% of the chord	3.0868%	0.16%
GOE 414	13.59% at 30.1% of the chord	5.25% at 40.0% of the chord	1.0621%	0.21%
GOE 415	8.47% at 20.0% of the chord	3.66% at 30.0% of the chord	0.664%	0.11%
GOE 416A	11.67% at 30.4% of the chord	1.33% at 60.2% of the chord	0.7305%	0.27%
GOE 417	6.0% at 20.0% of the chord	6.13% at 40.0% of the chord	0.7947%	0.0%
GOE 417A (GEW, PLATTE)	3.2% at 2.5% of the chord	5.9% at 40.0% of the chord	0.9824%	0.0%
GOE 418	12.7% at 20.0% of the chord	5.08% at 40.0% of the chord	2.7416%	0.0%
GOE 419	5.3% at 30.0% of the chord	4.4% at 40.0% of the chord	0.6142%	0.0%
GOE 420	18.75% at 30.0% of the chord	4.3% at 50.0% of the chord	2.9101%	0.0%
GOE 421	18.96% at 30.1% of the chord	8.08% at 50.0% of the chord	2.2439%	0.21%
GOE 422	17.04% at 30.1% of the chord	6.5% at 40.1% of the chord	2.9849%	0.21%
GOE 423	16.89% at 40.1% of the chord	5.05% at 40.1% of the chord	2.3626%	0.16%
GOE 424	19.99% at 30.5% of the chord	4.68% at 40.5% of the chord	2.022%	0.16%
GOE 425	16.01% at 30.2% of the chord	4.51% at 40.2% of the chord	1.8749%	0.11%
GOE 426	13.6% at 30.0% of the chord	4.55% at 40.0% of the chord	1.4758%	0.0%
GOE 427	4.6% at 20.0% of the chord	5.7% at 40.0% of the chord	0.5948%	0.0%
GOE 428	7.9% at 30.0% of the chord	5.22% at 40.0% of the chord	0.7011%	0.0%
GOE 429	11.38% at 30.0% of the chord	0.19% at 10.0% of the chord	1.3587%	0.32%
GOE 430	13.33% at 30.1% of the chord	4.82% at 50.0% of the chord	1.6524%	0.22%
GOE 431	11.8% at 20.0% of the chord	7.22% at 60.0% of the chord	1.1685%	0.0%
GOE 432	7.7% at 20.0% of the chord	4.34% at 40.0% of the chord	0.8878%	0.0%
GOE 433	17.32% at 30.3% of the chord	4.84% at 50.1% of the chord	2.8801%	0.16%
GOE 434	22.58% at 30.7% of the chord	5.15% at 50.4% of the chord	6.2006%	0.16%
GOE 435	25.88% at 31.2% of the chord	4.65% at 50.7% of the chord	6.1986%	0.27%
GOE 436	11.0% at 30.0% of the chord	3.75% at 30.0% of the chord	1.3684%	0.0%
GOE 437	7.05% at 30.0% of the chord	4.8% at 40.0% of the chord	0.6184%	0.0%
GOE 438	10.99% at 30.0% of the chord	3.76% at 40.0% of the chord	1.3846%	0.0%
GOE 439	7.9% at 30.0% of the chord	5.22% at 40.0% of the chord	0.7011%	0.0%
GOE 440	15.25% at 30.0% of the chord	9.7% at 40.0% of the chord	0.6807%	0.26%
GOE 441	15.92% at 30.0% of the chord	7.72% at 40.0% of the chord	2.5029%	0.27%
GOE 442	7.7% at 20.0% of the chord	4.33% at 40.0% of the chord	0.8907%	0.0%
GOE 443	5.0% at 30.0% of the chord	0.0% at 0.0% of the chord	0.7187%	0.0%
GOE 444	5.6% at 30.0% of the chord	0.0% at 0.0% of the chord	0.7187%	0.0%
GOE 445	6.4% at 40.0% of the chord	0.0% at 0.0% of the chord	0.7139%	0.0%
GOE 446	12.87% at 30.0% of the chord	6.33% at 40.0% of the chord	1.6709%	0.32%
GOE 447	12.67% at 30.0% of the chord	8.01% at 40.0% of the chord	1.6979%	0.32%
GOE 448	12.88% at 30.0% of the chord	10.51% at 39.9% of the chord	1.4524%	0.26%
GOE 449	16.95% at 30.0% of the chord	5.39% at 40.0% of the chord	2.2757%	0.0%
GOE 450	8.9% at 30.0% of the chord	5.18% at 40.0% of the chord	0.9927%	0.21%
GOE 456	7.2% at 30.0% of the chord	5.2% at 40.0% of the chord	0.5726%	0.0%
GOE 457	7.83% at 20.0% of the chord	4.22% at 40.0% of the chord	0.8864%	0.0%
GOE 458	7.2% at 30.0% of the chord	5.2% at 40.0% of the chord	0.5644%	0.0%
GOE 459	12.7% at 30.0% of the chord	0.0% at 0.0% of the chord	1.3224%	0.0%
GOE 460	20.5% at 30.0% of the chord	0.0% at 0.0% of the chord	2.9061%	0.0%
GOE 462	10.99% at 10.0% of the chord	13.37% at 29.9% of the chord	1.1379%	0.0%
GOE 464	7.72% at 7.5% of the chord	9.91% at 29.9% of the chord	1.4907%	0.0%
GOE 474	6.95% at 30.0% of the chord	2.9% at 40.0% of the chord	0.7757%	0.0%
GOE 476	14.43% at 30.1% of the chord	5.2% at 40.1% of the chord	2.5605%	0.0%
GOE 477	10.05% at 30.0% of the chord	4.88% at 40.0% of the chord	1.5475%	0.0%
GOE 478	13.33% at 30.1% of the chord	4.29% at 40.1% of the chord	2.4149%	0.0%

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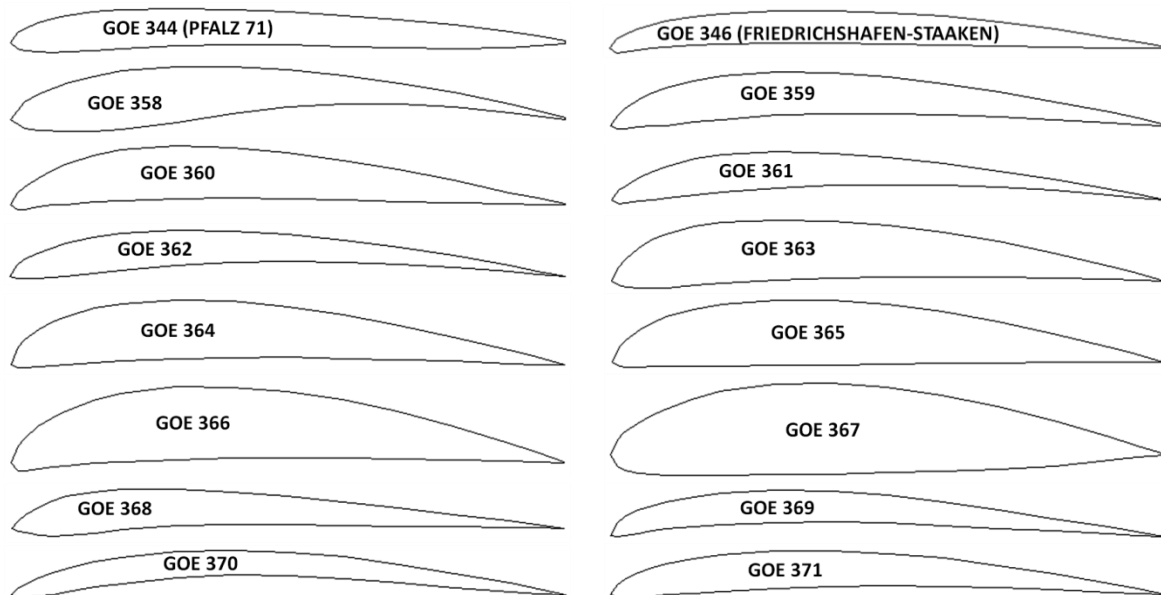
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GOE 479	11.6% at 30.0% of the chord	4.0% at 40.0% of the chord	1.5902%	0.0%
GOE 480	11.75% at 30.0% of the chord	5.5% at 40.0% of the chord	2.1319%	0.0%
GOE 481	13.57% at 10.2% of the chord	8.8% at 39.8% of the chord	3.3044%	0.0%
GOE 481A	15.27% at 30.1% of the chord	5.49% at 40.1% of the chord	3.1629%	0.0%
GOE 482	16.49% at 30.0% of the chord	8.8% at 40.0% of the chord	2.0245%	0.0%
GOE 483	5.45% at 15.0% of the chord	5.82% at 40.0% of the chord	0.595%	0.0%
GOE 484	6.25% at 30.0% of the chord	4.95% at 50.0% of the chord	0.9239%	0.0%
GOE 488	6.8% at 20.0% of the chord	3.04% at 40.0% of the chord	0.8526%	0.0%
GOE 490	8.81% at 20.0% of the chord	3.83% at 40.0% of the chord	0.8796%	0.0%
GOE 491	4.85% at 20.0% of the chord	2.95% at 30.0% of the chord	0.6235%	0.0%
GOE 492	6.2% at 30.0% of the chord	3.37% at 50.0% of the chord	0.6641%	0.0%
GOE 493	14.97% at 30.3% of the chord	3.36% at 50.2% of the chord	1.4106%	0.0%
GOE 494	4.95% at 20.0% of the chord	5.1% at 50.0% of the chord	0.6508%	0.0%
GOE 495	6.9% at 30.0% of the chord	5.0% at 50.0% of the chord	0.7483%	0.0%
GOE 496	9.95% at 30.0% of the chord	5.0% at 50.0% of the chord	1.1611%	0.0%
GOE 497	12.7% at 30.0% of the chord	5.33% at 50.0% of the chord	1.6033%	0.0%
GOE 498	15.86% at 30.2% of the chord	5.49% at 50.0% of the chord	2.8845%	0.0%
GOE 499	6.8% at 30.0% of the chord	5.85% at 50.0% of the chord	0.7529%	0.0%
GOE 500	10.0% at 30.0% of the chord	6.0% at 50.0% of the chord	1.1234%	0.0%
GOE 501	12.8% at 30.0% of the chord	6.3% at 50.0% of the chord	1.6978%	0.0%
GOE 502	15.83% at 30.1% of the chord	6.09% at 50.0% of the chord	2.9382%	0.0%
GOE 503	15.59% at 30.0% of the chord	6.97% at 40.0% of the chord	1.4831%	0.0%
GOE 504	17.95% at 30.2% of the chord	5.39% at 40.2% of the chord	1.4327%	0.0%
GOE 505	13.97% at 20.1% of the chord	5.88% at 40.0% of the chord	1.4547%	0.0%
GOE 506	16.45% at 30.2% of the chord	4.66% at 40.2% of the chord	1.3907%	0.0%
GOE 507	8.65% at 30.0% of the chord	2.92% at 40.0% of the chord	1.6554%	0.0%
GOE 508	16.5% at 30.0% of the chord	5.64% at 40.0% of the chord	2.5874%	0.0%
GOE 509	11.05% at 20.0% of the chord	5.17% at 30.0% of the chord	1.2246%	0.0%
GOE 510	13.72% at 20.0% of the chord	5.84% at 40.0% of the chord	1.7965%	0.0%
GOE 511	16.61% at 20.0% of the chord	7.98% at 30.0% of the chord	2.5638%	0.0%
GOE 512	13.91% at 20.0% of the chord	5.62% at 30.0% of the chord	1.555%	0.0%
GOE 513	16.62% at 20.1% of the chord	5.22% at 30.1% of the chord	2.3329%	0.0%
GOE 514	16.58% at 20.1% of the chord	6.44% at 40.0% of the chord	1.8094%	0.0%
GOE 515	8.45% at 30.0% of the chord	2.79% at 40.0% of the chord	0.9365%	0.0%
GOE 517	7.0% at 30.0% of the chord	4.65% at 40.0% of the chord	1.3226%	0.0%
GOE 518	17.99% at 30.0% of the chord	7.29% at 30.0% of the chord	2.6353%	0.0%
GOE 522	21.72% at 30.5% of the chord	5.18% at 50.3% of the chord	4.2335%	0.0%
GOE 523	16.45% at 30.0% of the chord	9.7% at 49.9% of the chord	2.2978%	0.0%
GOE 525	16.45% at 30.0% of the chord	9.7% at 49.9% of the chord	2.2978%	0.0%
GOE 526	12.29% at 30.1% of the chord	4.13% at 40.1% of the chord	1.9446%	0.0%
GOE 527	16.52% at 30.1% of the chord	5.81% at 40.1% of the chord	2.3719%	0.0%
GOE 528	12.44% at 30.0% of the chord	6.19% at 40.0% of the chord	1.595%	0.0%

Table 2. The geometric shapes of the airfoils in the cross section.

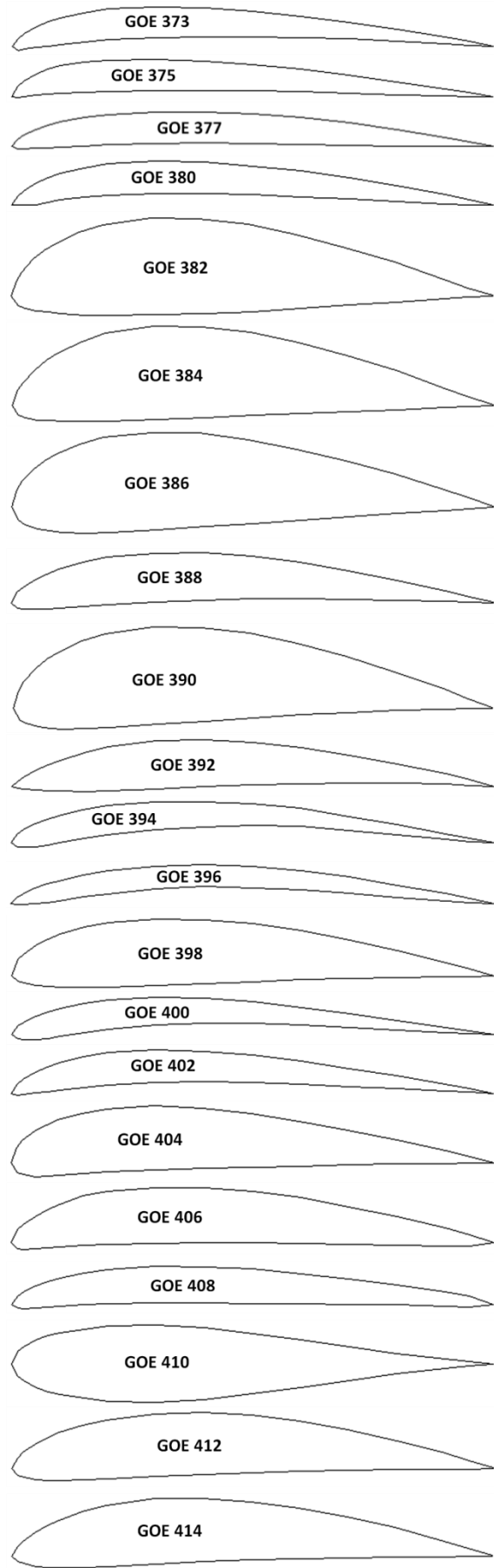
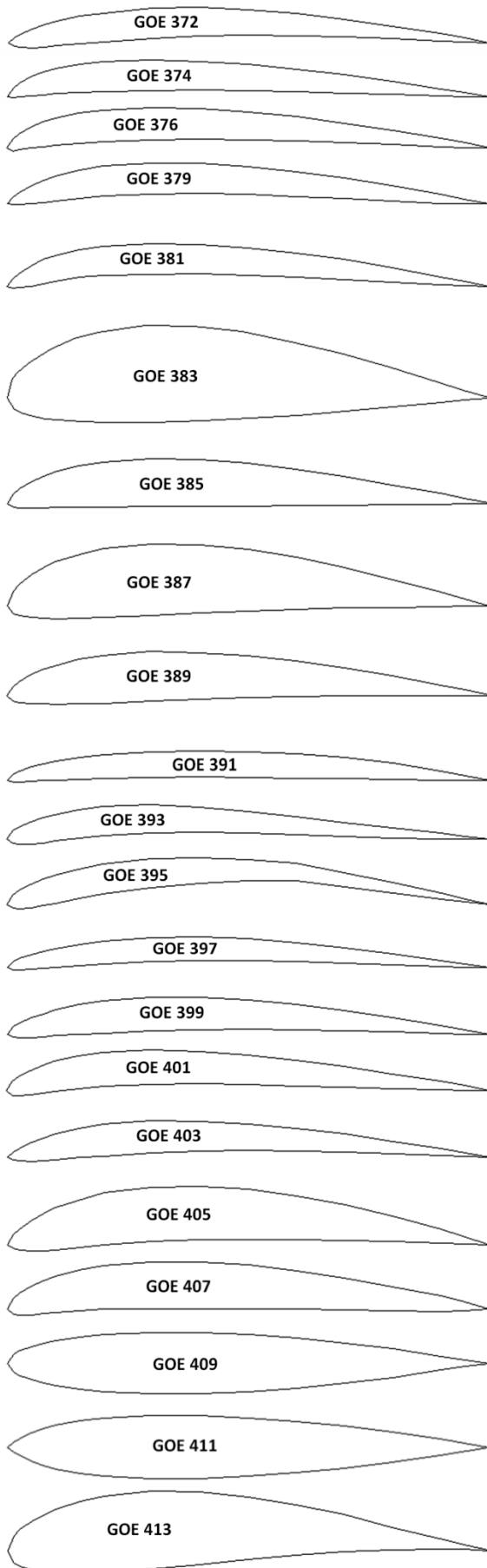


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JIF = 1.500

SIS (USA) = 0.912
ПИИЦ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

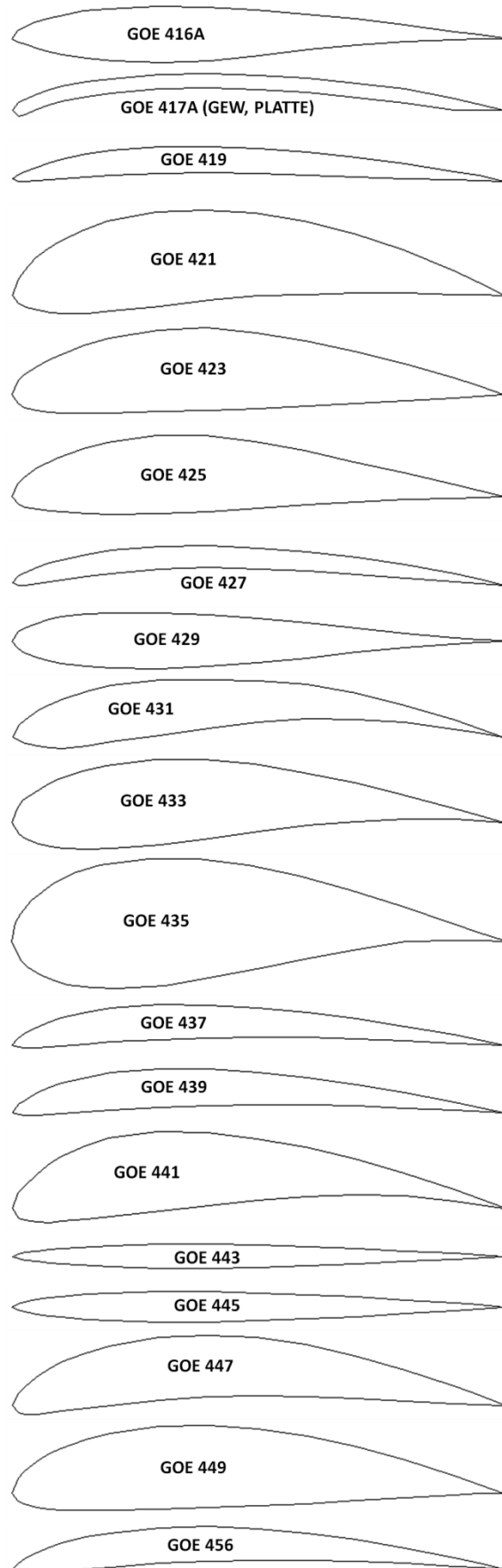
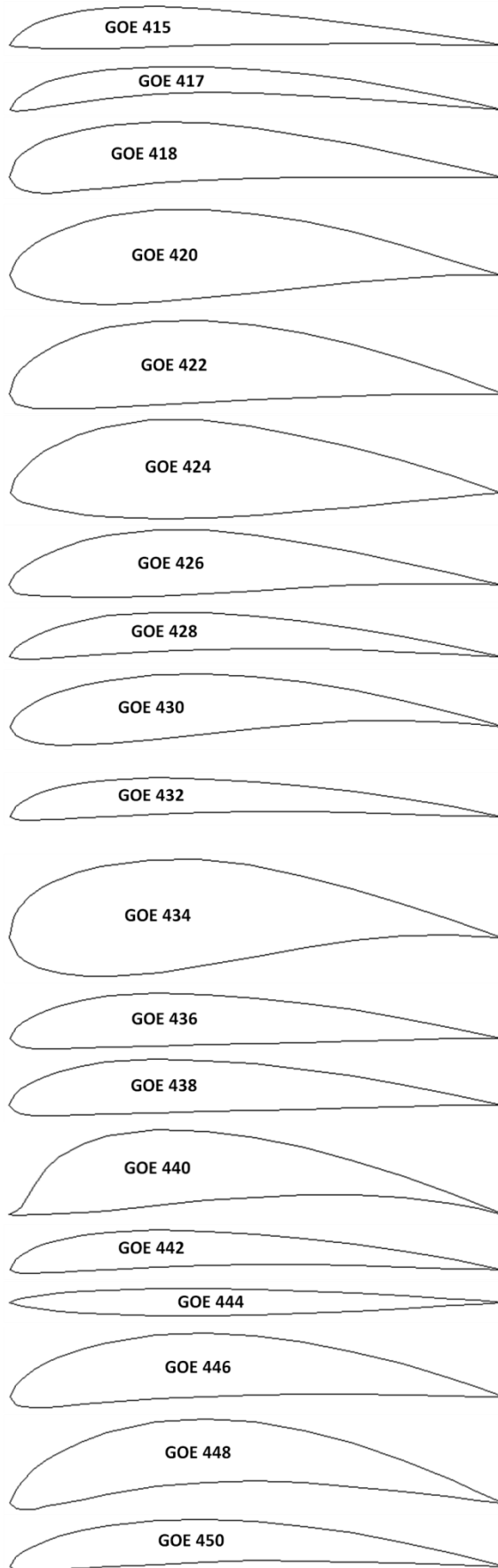


Impact Factor:

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ISI (Dubai, UAE) = 1.582
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SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

GOE 457

GOE 459

GOE 462

GOE 474

GOE 477

GOE 479

GOE 481

GOE 482

GOE 484

GOE 490

GOE 492

GOE 494

GOE 496

GOE 498

GOE 500

GOE 502

GOE 504

GOE 506

GOE 458

GOE 460

GOE 464

GOE 476

GOE 478

GOE 480

GOE 481A

GOE 483

GOE 488

GOE 491

GOE 493

GOE 495

GOE 497

GOE 499

GOE 501

GOE 503

GOE 505

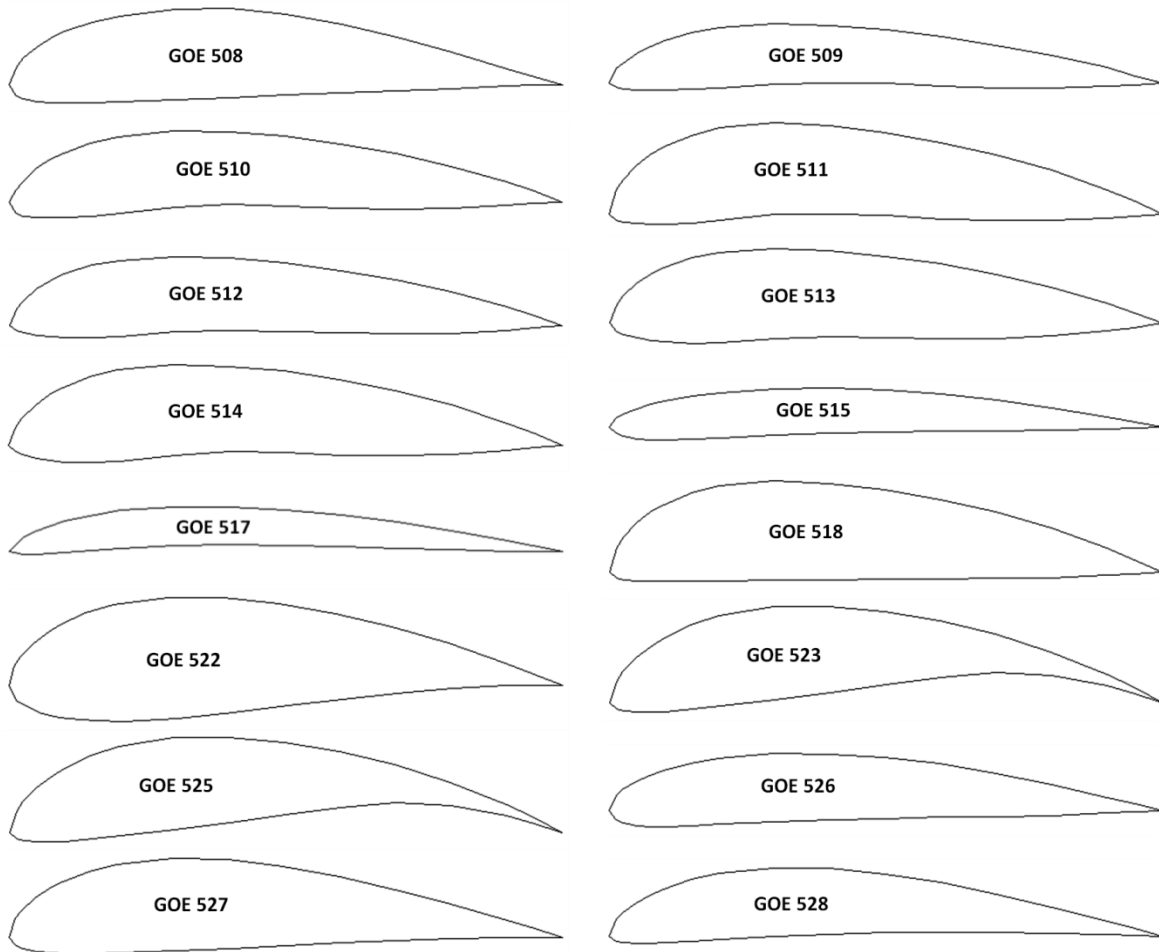
GOE 507

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
ПИИЦ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350



Results and discussion

The calculated pressure contours on the surfaces of the airfoils at the different angles of attack are presented in the Figs. 1-148. The calculated values on the scale can be represented as the basic values when comparing the pressure drop under conditions of changing the angle of attack of the airfoils. In this work, 148 airfoils of the GOE series were studied, both symmetrical and asymmetrical geometric shapes in the cross section of the airplane wing.

The biconvex airfoils of the subsonic airplanes (GOE 409 – GOE 411, GOE 459 – GOE 460) and the arc airfoils of the supersonic airplanes (GOE 443 – GOE 445) are symmetrical. The other airfoils are asymmetrical.

The following airfoils of the airplanes wings were selected for consideration among them:

1. Subsonic airplane.

- convex-concave: GOE 358, GOE 431, GOE 482, GOE 523, GOE 525;
- flat-convex: GOE 422, GOE 518;
- biconvex asymmetrical: GOE 382, GOE 424, GOE 449, GOE 493.

2. Transonic airplane.

- biconvex asymmetrical: GOE 415, GOE 426, GOE 479.

For the asymmetrical airfoils selected above (from each type of the wing profile) used at the subsonic airplane flight speed, the calculated values of the pressure change at the leading edge (drag) were analyzed. The calculated values of positive and negative pressures arising at the different angles of attack of the airfoil are (at $\alpha = 0/15/-15$ degrees):

- GOE 358 – 6.58/-54/-19.9 kPa;
- GOE 431 – 6.63/-50.8/-45.1 kPa;
- GOE 482 – 6.7/-23.1/-30.4 kPa;
- GOE 523 – 6.76/-23.8/-22.7 kPa;
- GOE 525 – 6.76/-23.8/-22.7 kPa.

The GOE 523 and GOE 525 have the best aerodynamic characteristics of the considered airfoils in conditions of maneuvers. The surface area of the leading edge and the thickness of the airfoil affect the value of drag in conditions of horizontal flight of the airplane. Therefore, the GOE 358 airfoil has the optimal geometric shape.

The pressures values were obtained for the following airfoils:

- GOE 422 – 6.65/-27/-57.1 kPa;
- GOE 518 – 6.63/-22.4/-11.5 kPa.

The GOE 518 airfoil has less drag than the GOE 422 airfoil.

- GOE 382 – 6.68/-21.1/-53.1 kPa;

Impact Factor:

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ISI (Dubai, UAE)	= 1.582	ПИИЦ (Russia)	= 3.939	PIF (India)	= 1.940
GIF (Australia)	= 0.564	ESJI (KZ)	= 9.035	IBI (India)	= 4.260
JIF	= 1.500	SJIF (Morocco)	= 7.184	OAJI (USA)	= 0.350

GOE 424 – 6.65/-22.9/-57.9 kPa;
 GOE 449 – 6.63/-28.5/-54.3 kPa;
 GOE 493 – 6.64/-46.7/-64.4 kPa.

Minimum drag is observed in the GOE 382 (the analysis was performed on the basis of the considered biconvex asymmetrical airfoils).

The similar analysis of the aerodynamic characteristics was performed for the airfoils of the wings used for the transonic airplanes. The calculated values of pressures arising at the different angles of attack of the airfoil are (at $\alpha = 0/15/-15$ degrees):

GOE 415 – 6.49/-94.4/-15.8 kPa;
 GOE 426 – 6.6/-44.2/-56.1 kPa;
 GOE 479 – 6.55/-47.2/-72.9 kPa.

Considering the numerical values, it was found that the pressures difference in conditions of the airplane maneuvers is maximum for the GOE 415 airfoil, and minimum for the GOE 426 airfoil.

The analysis of the aerodynamic characteristics showed that an increase in the thickness of the subsonic symmetrical airfoils and a decrease in the radius of the leading edge and the thickness of the supersonic symmetrical airfoils contribute to a decrease in the drag difference.

The GOE 440 airfoil during horizontal flight and descent of the airplane is affected by almost the same

positive pressure at the leading edge. Drag of the GOE 440 airfoil during climb of the airplane is comparable to drag of the supersonic airfoils.

The GOE 462 airfoil is curved. The areas of positive and negative pressures are formed at the leading edge at all positions of the airplane wing. The drag coefficient of the given airfoil when the airplane climb is twice as high as when the airplane descent.

A maximum increase in pressure at the leading edge occurs at the angle of attack of -15 degrees for the following airfoils: GOE 367, GOE 382, GOE 383, GOE 384, GOE 386, GOE 390, GOE 398, GOE 404, GOE 411, GOE 412, GOE 413, GOE 414, GOE 418, GOE 420, GOE 421, GOE 422, GOE 423, GOE 424, GOE 425, GOE 426, GOE 429, GOE 430, GOE 433, GOE 434, GOE 435, GOE 436, GOE 438, GOE 441, GOE 445, GOE 449, GOE 459, GOE 476, GOE 478, GOE 479, GOE 481, GOE 481A, GOE 482, GOE 493, GOE 497, GOE 498, GOE 501, GOE 502, GOE 503, GOE 504, GOE 505, GOE 506, GOE 508, GOE 510, GOE 512, GOE 513, GOE 514, GOE 522, GOE 526 and GOE 527. A maximum increase in pressure at the leading edge occurs at the angle of attack of 15 degrees for the other airfoils.

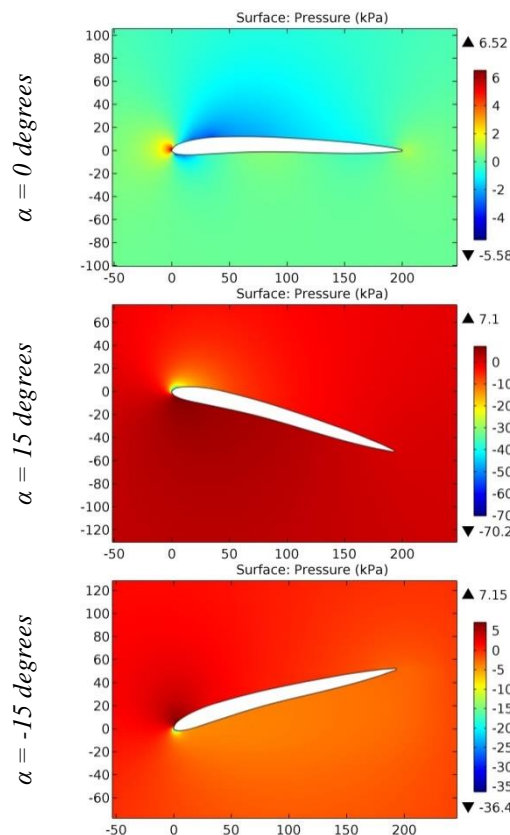


Figure 1. The pressure contours on the surfaces of the GOE 344 (PFALZ 71) airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

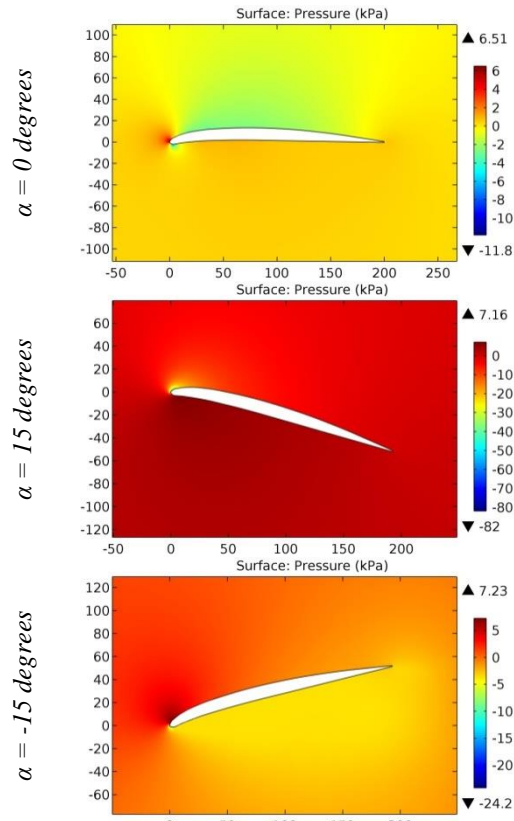


Figure 2. The pressure contours on the surfaces of the GOE 346 (FRIEDRICHSHAFEN-STAAKEN) airfoil.

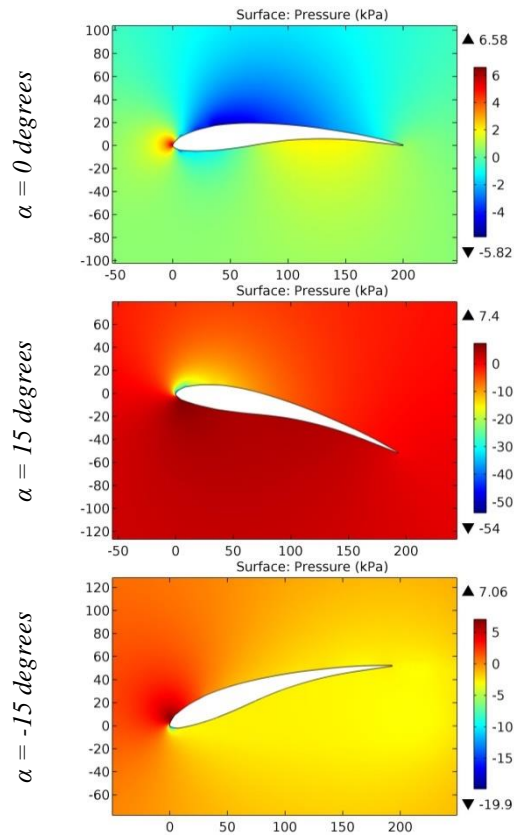


Figure 3. The pressure contours on the surfaces of the GOE 358 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

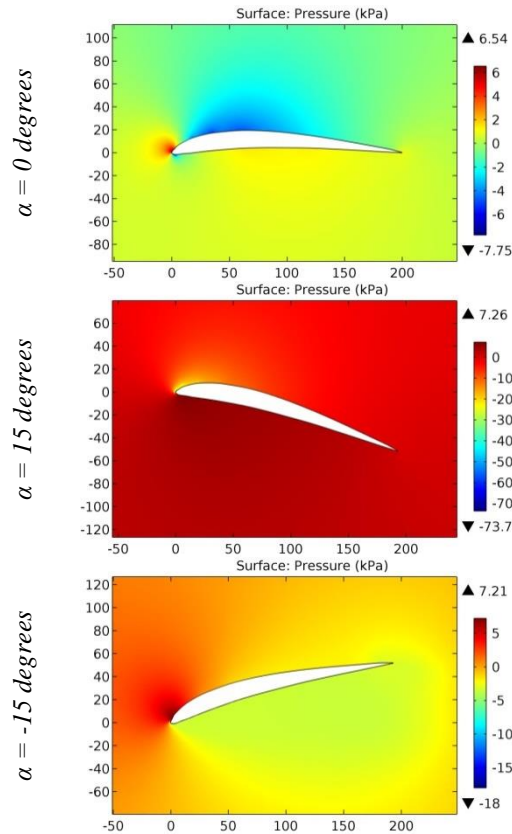


Figure 4. The pressure contours on the surfaces of the GOE 359 airfoil.

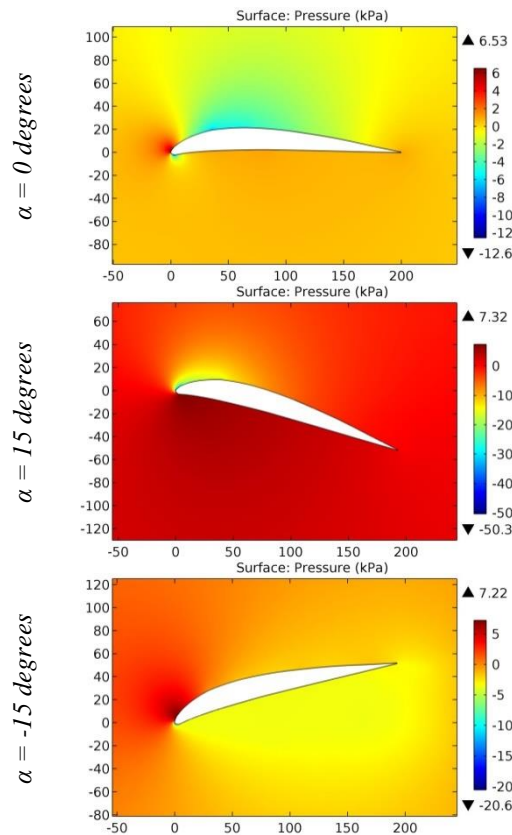


Figure 5. The pressure contours on the surfaces of the GOE 360 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

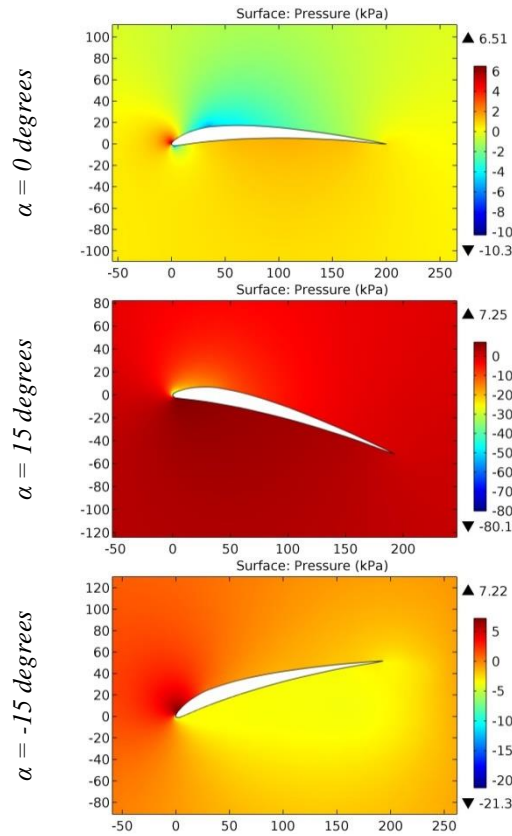


Figure 6. The pressure contours on the surfaces of the GOE 361 airfoil.

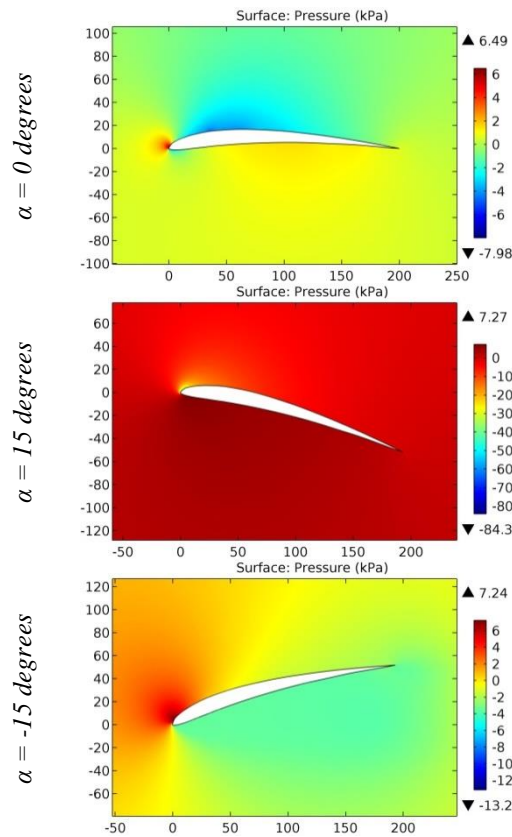


Figure 7. The pressure contours on the surfaces of the GOE 362 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

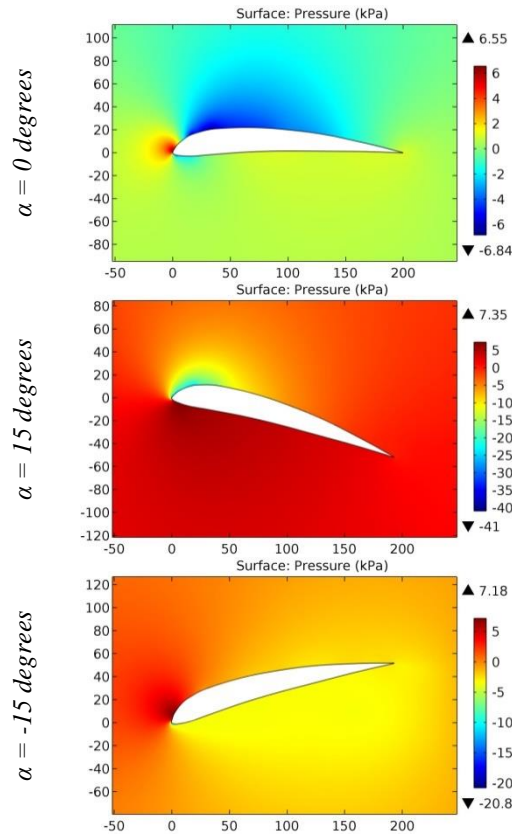


Figure 8. The pressure contours on the surfaces of the GOE 363 airfoil.

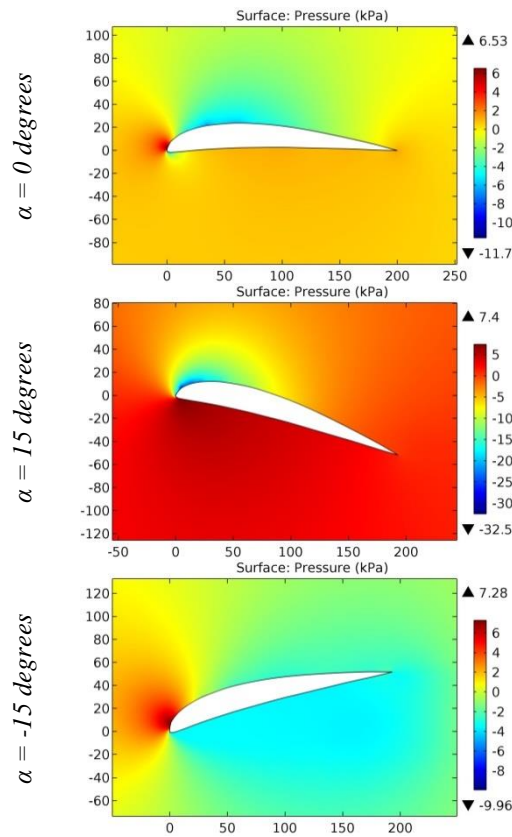


Figure 9. The pressure contours on the surfaces of the GOE 364 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

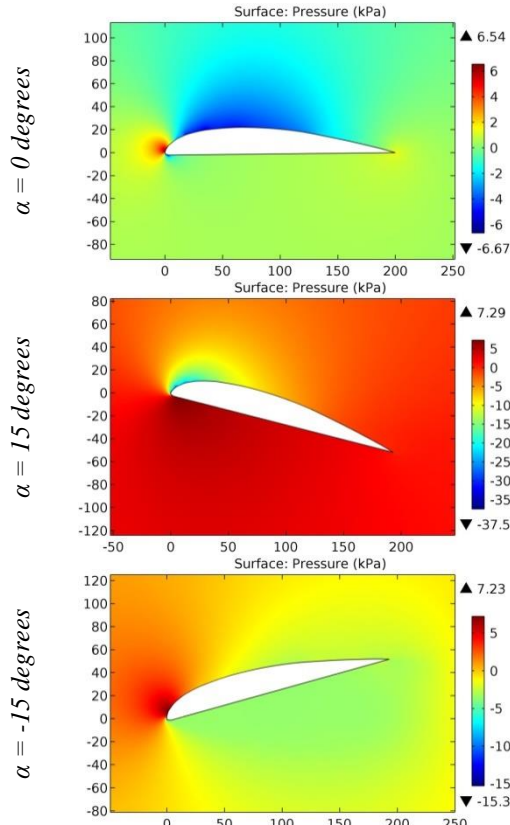


Figure 10. The pressure contours on the surfaces of the GOE 365 airfoil.

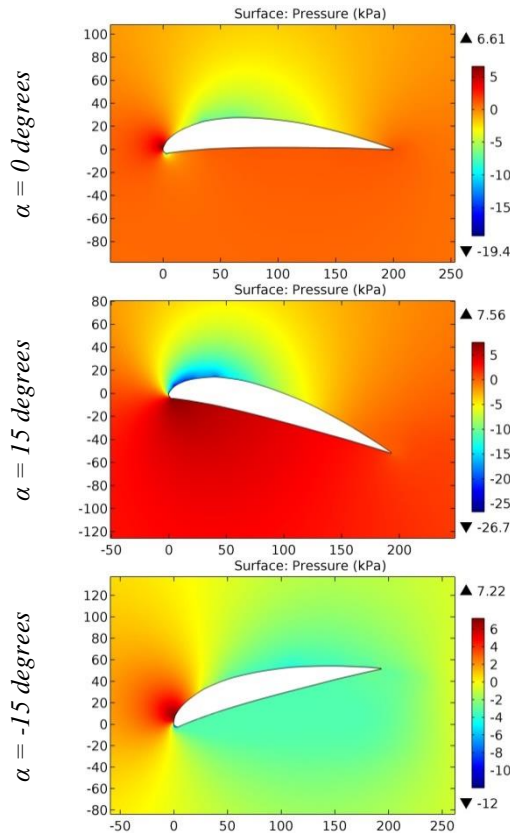


Figure 11. The pressure contours on the surfaces of the GOE 366 airfoil.

Impact Factor:

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ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

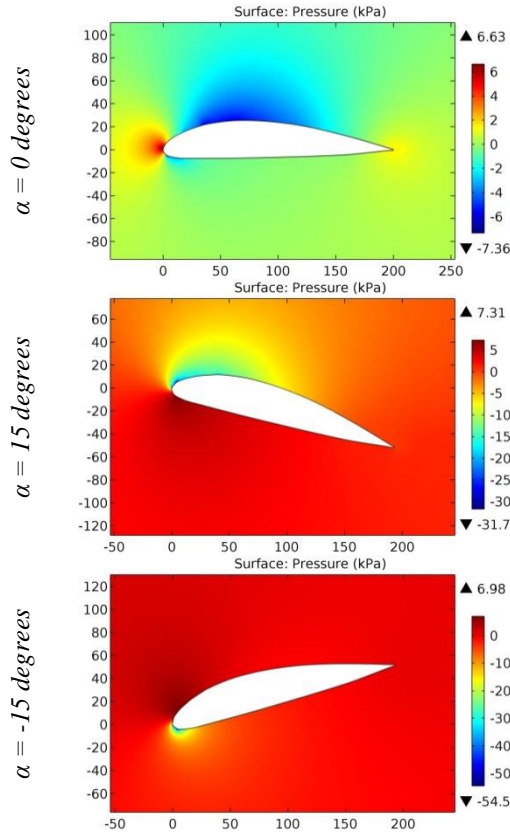


Figure 12. The pressure contours on the surfaces of the GOE 367 airfoil.

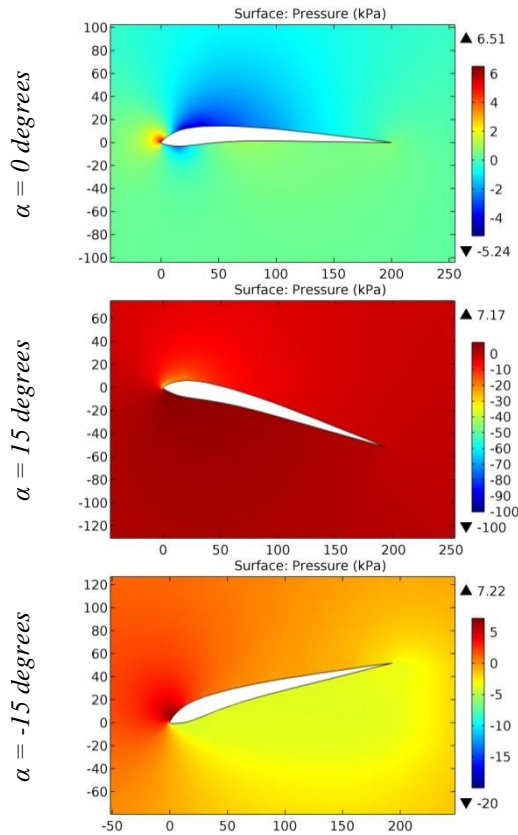


Figure 13. The pressure contours on the surfaces of the GOE 368 airfoil.

Impact Factor:

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ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

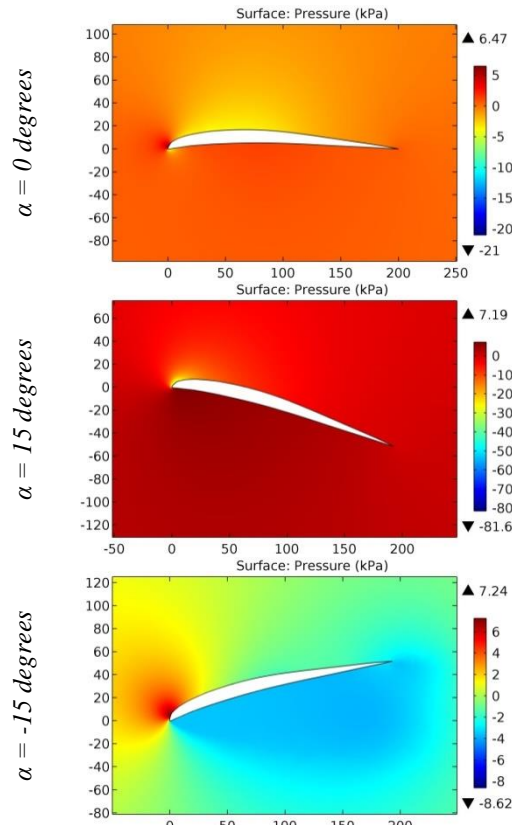


Figure 14. The pressure contours on the surfaces of the GOE 369 airfoil.

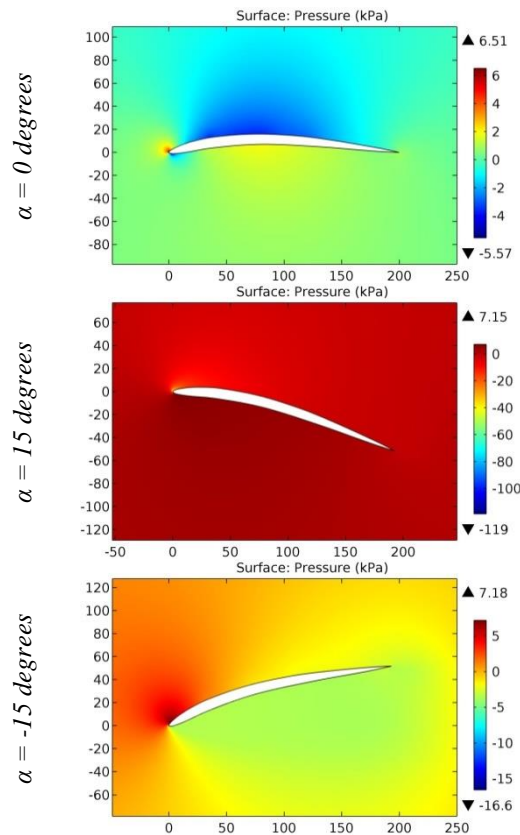


Figure 15. The pressure contours on the surfaces of the GOE 370 airfoil.

Impact Factor:

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GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

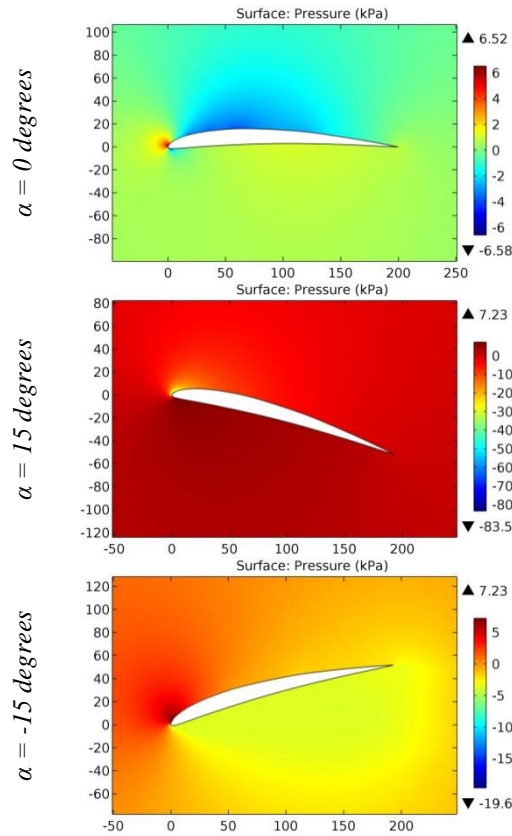


Figure 16. The pressure contours on the surfaces of the GOE 371 airfoil.

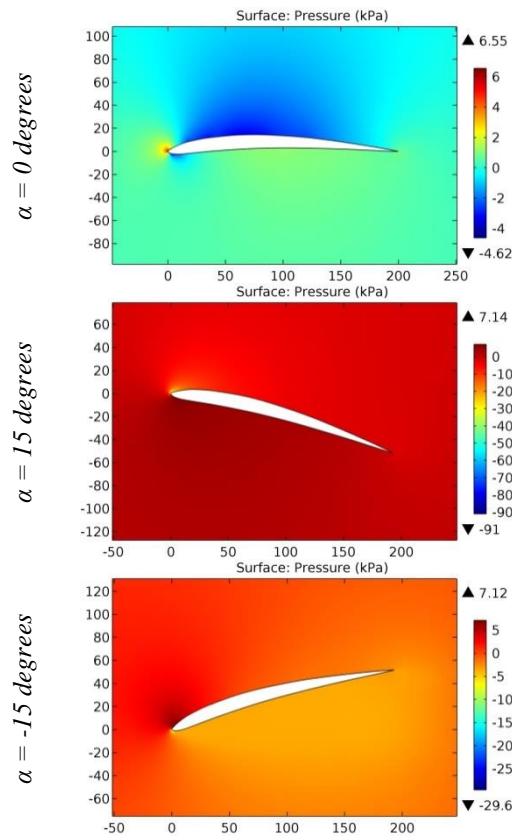


Figure 17. The pressure contours on the surfaces of the GOE 372 airfoil.

Impact Factor:

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ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

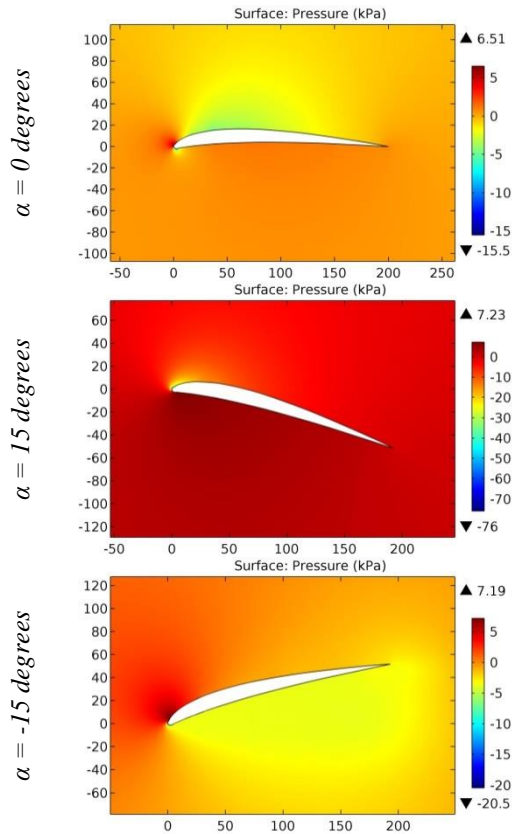


Figure 18. The pressure contours on the surfaces of the GOE 373 airfoil.

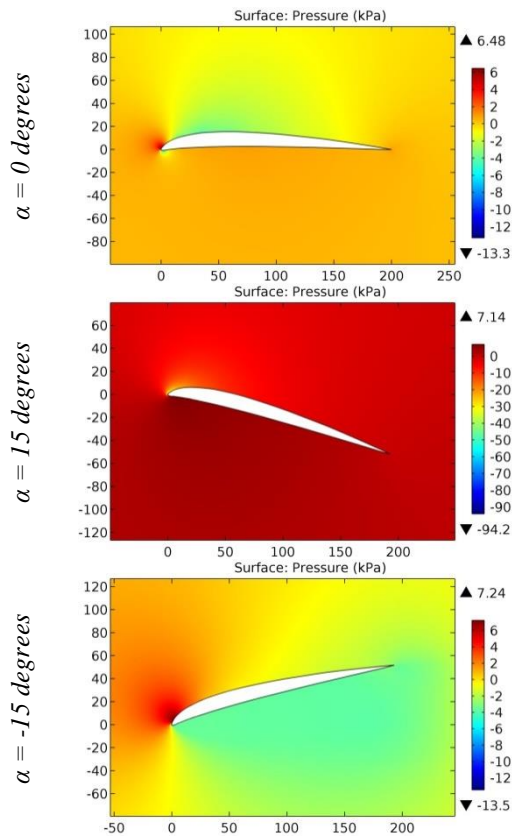


Figure 19. The pressure contours on the surfaces of the GOE 374 airfoil.

Impact Factor:

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ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

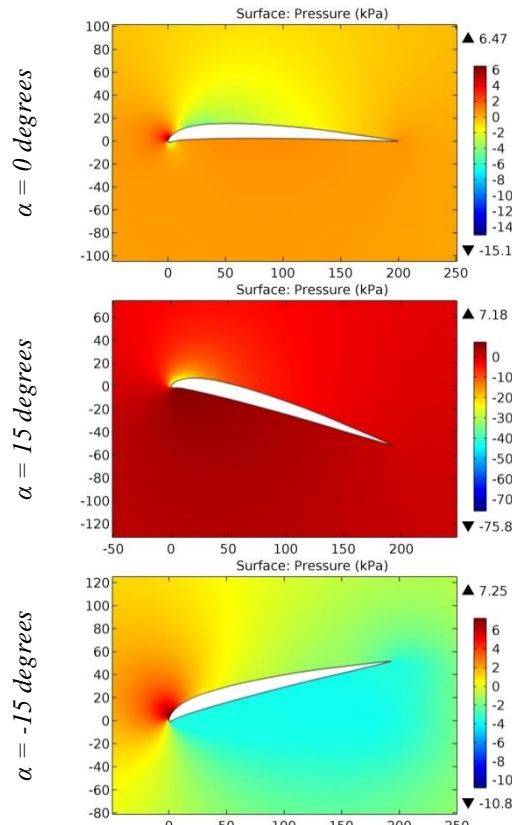


Figure 20. The pressure contours on the surfaces of the GOE 375 airfoil.

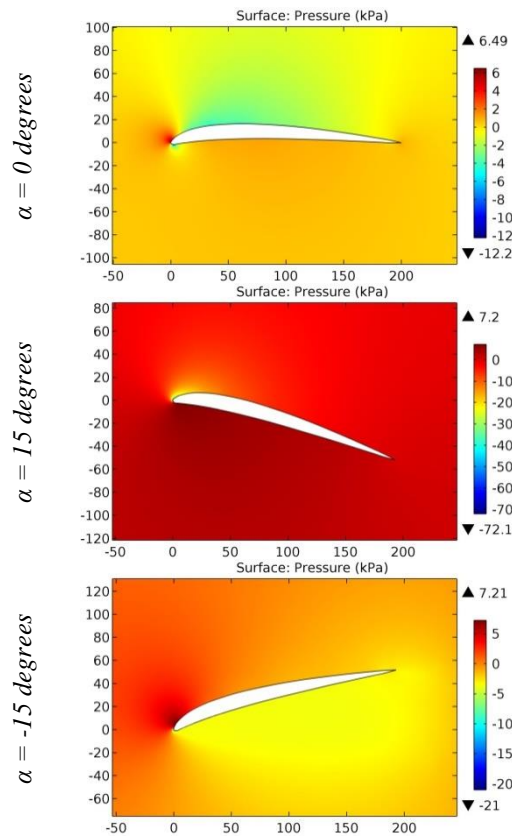


Figure 21. The pressure contours on the surfaces of the GOE 376 airfoil.

Impact Factor:

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ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

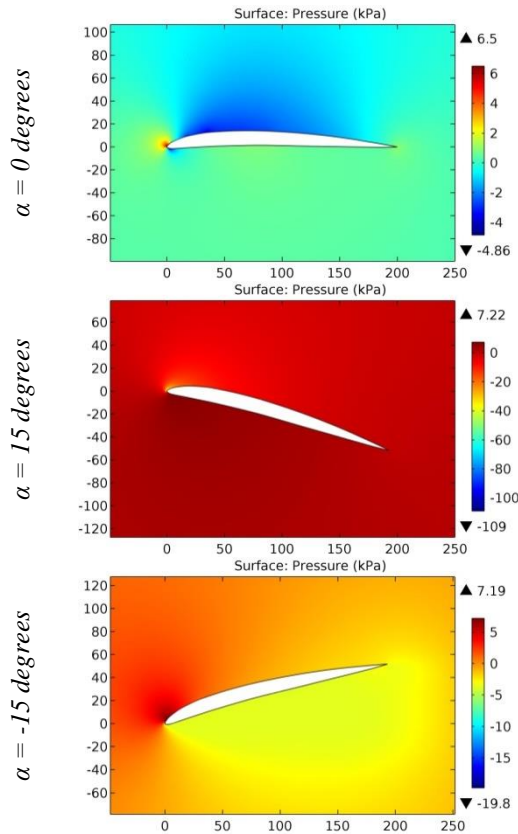


Figure 22. The pressure contours on the surfaces of the GOE 377 airfoil.

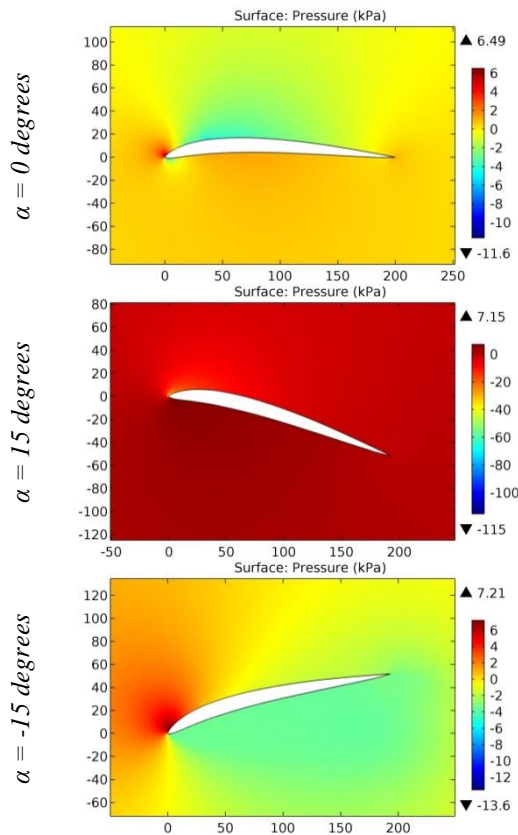


Figure 23. The pressure contours on the surfaces of the GOE 379 airfoil.

Impact Factor:

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ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

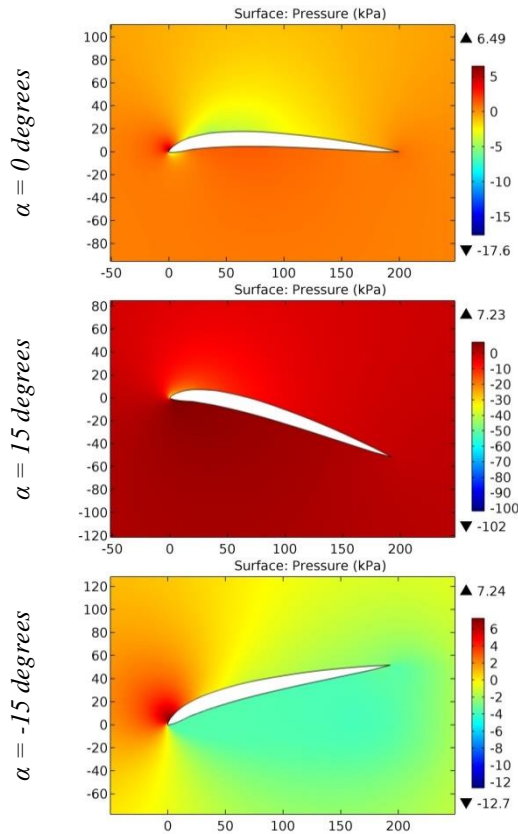


Figure 24. The pressure contours on the surfaces of the GOE 380 airfoil.

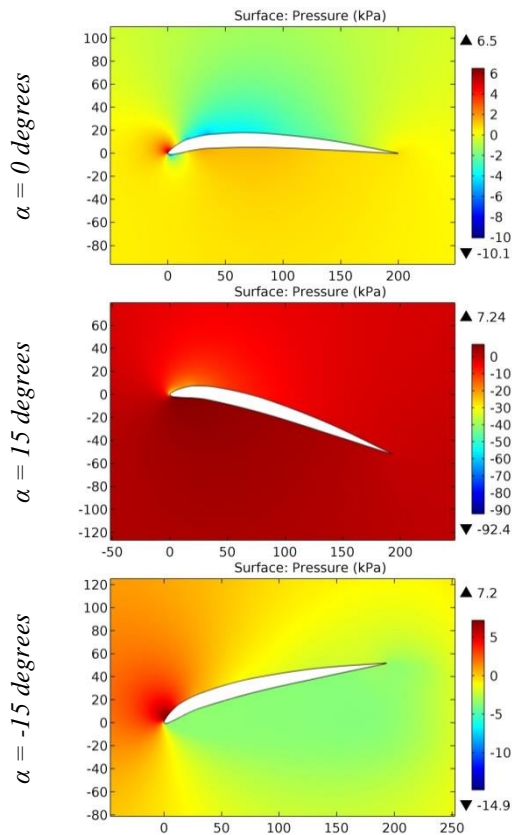


Figure 25. The pressure contours on the surfaces of the GOE 381 airfoil.

Impact Factor:

ISRA (India)	= 6.317	SIS (USA)	= 0.912	ICV (Poland)	= 6.630
ISI (Dubai, UAE)	= 1.582	ПИИЦ (Russia)	= 3.939	PIF (India)	= 1.940
GIF (Australia)	= 0.564	ESJI (KZ)	= 9.035	IBI (India)	= 4.260
JIF	= 1.500	SJIF (Morocco)	= 7.184	OAJI (USA)	= 0.350

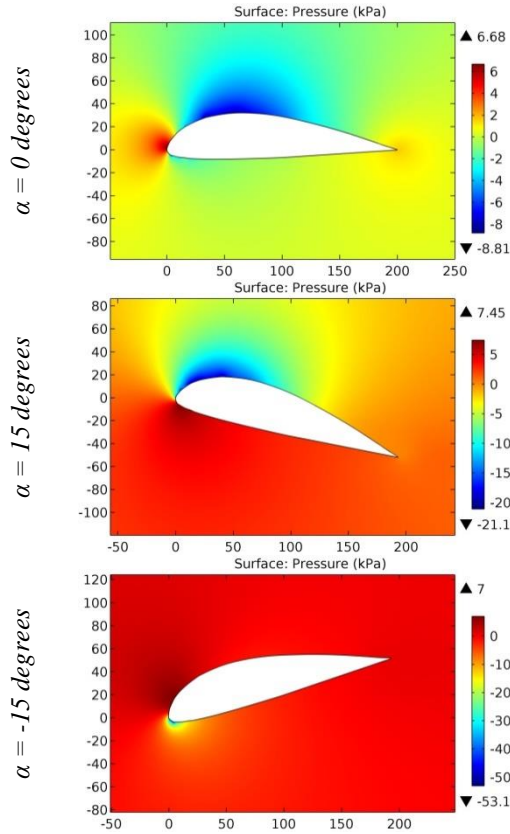


Figure 26. The pressure contours on the surfaces of the GOE 382 airfoil.

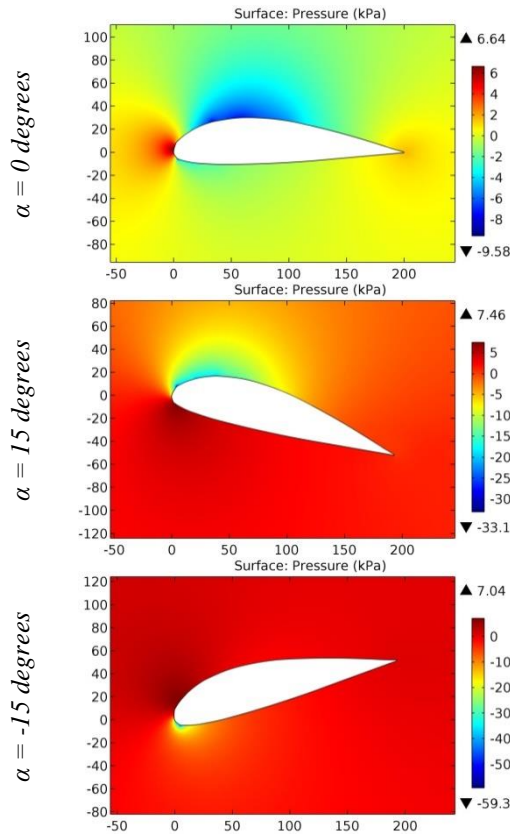


Figure 27. The pressure contours on the surfaces of the GOE 383 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

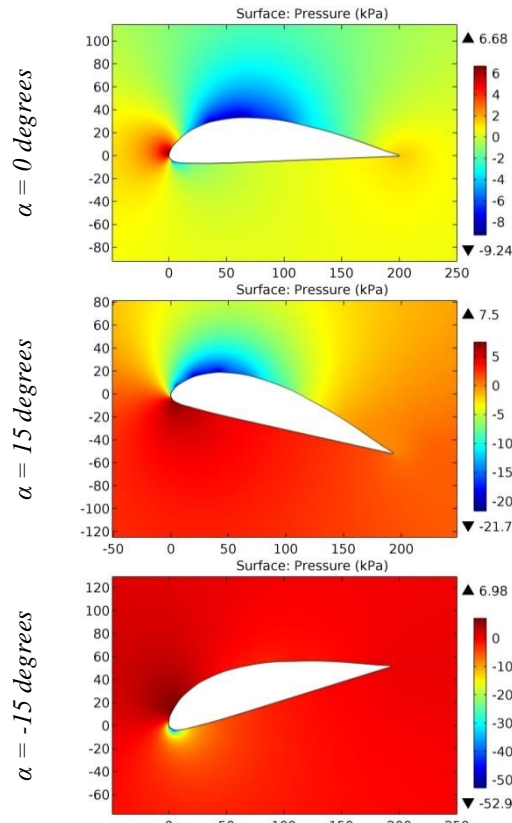


Figure 28. The pressure contours on the surfaces of the GOE 384 airfoil.

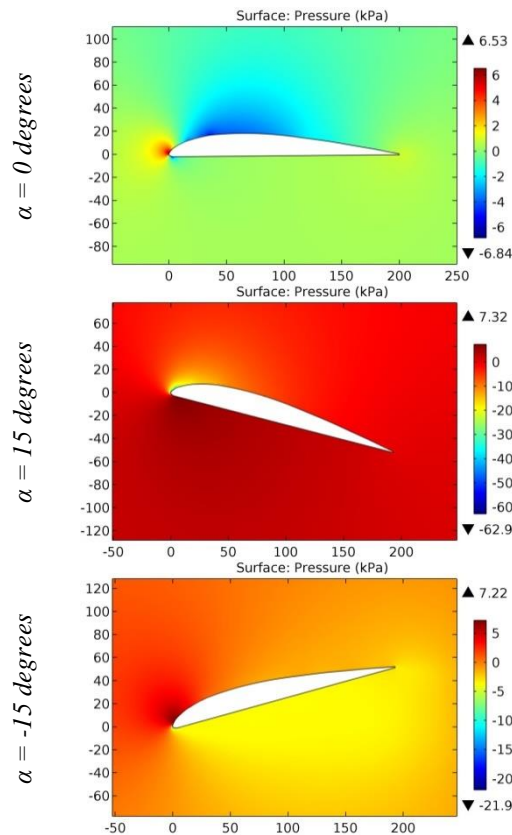


Figure 29. The pressure contours on the surfaces of the GOE 385 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

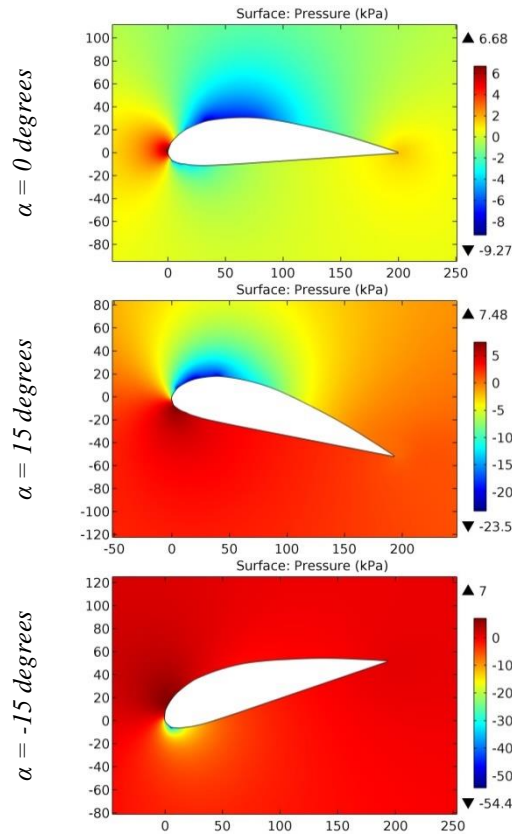


Figure 30. The pressure contours on the surfaces of the GOE 386 airfoil.

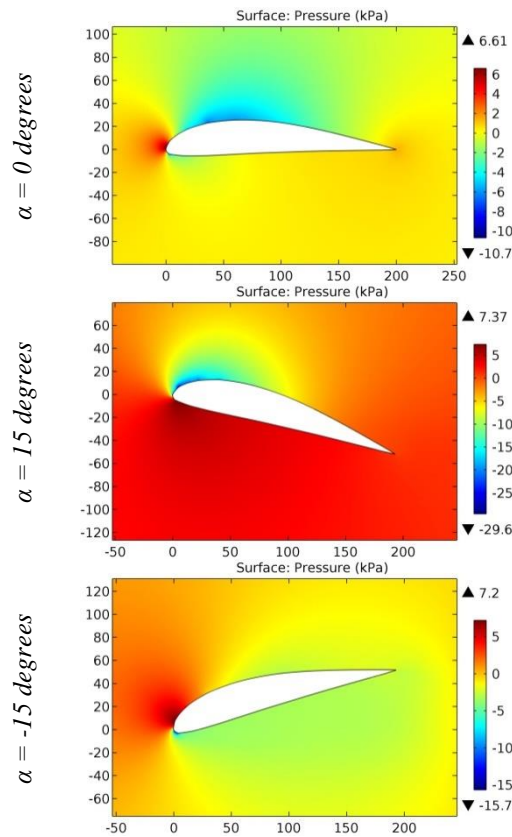


Figure 31. The pressure contours on the surfaces of the GOE 387 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

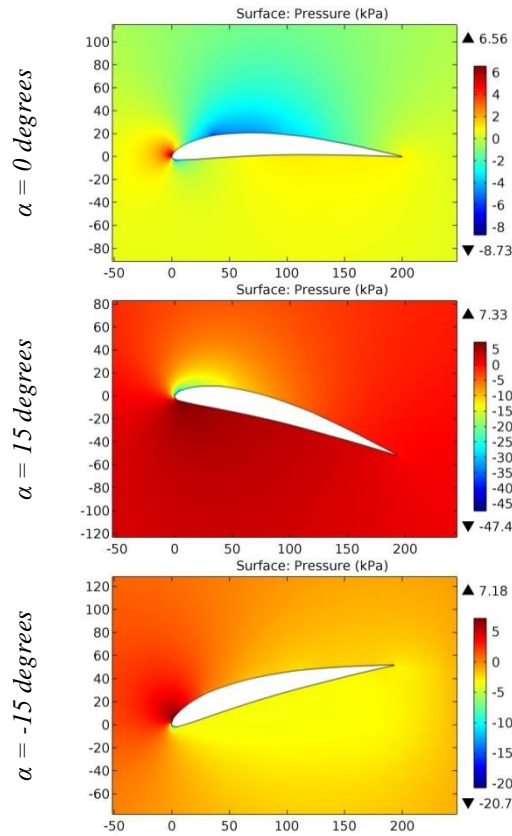


Figure 32. The pressure contours on the surfaces of the GOE 388 airfoil.

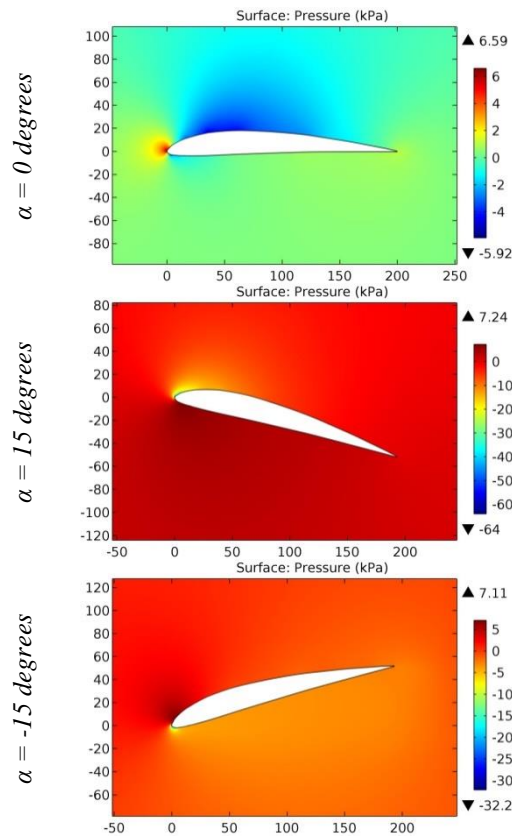


Figure 33. The pressure contours on the surfaces of the GOE 389 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

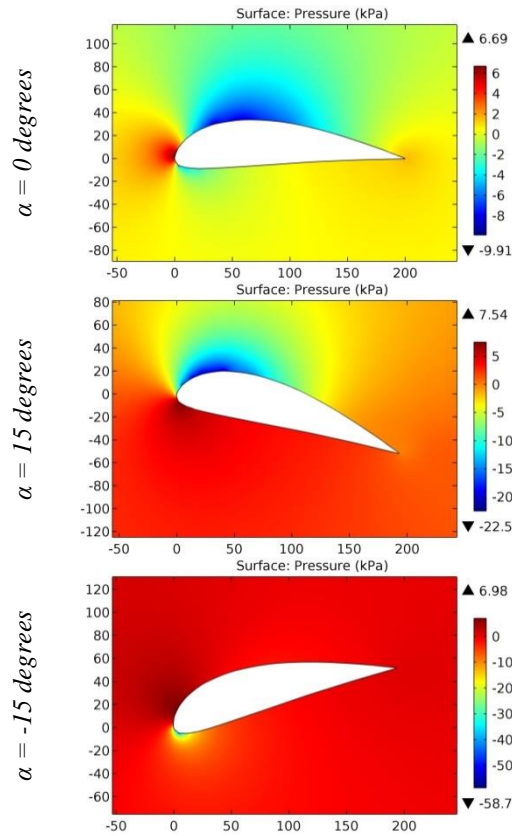


Figure 34. The pressure contours on the surfaces of the GOE 390 airfoil.

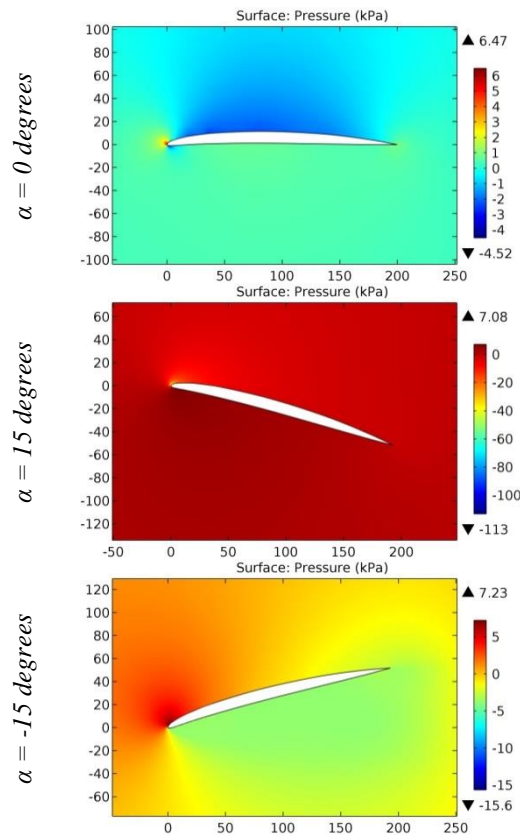


Figure 35. The pressure contours on the surfaces of the GOE 391 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

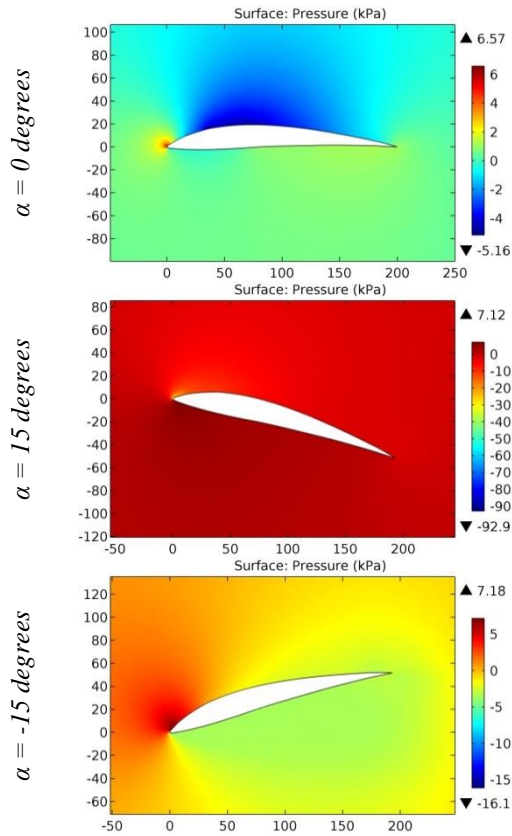


Figure 36. The pressure contours on the surfaces of the GOE 392 airfoil.

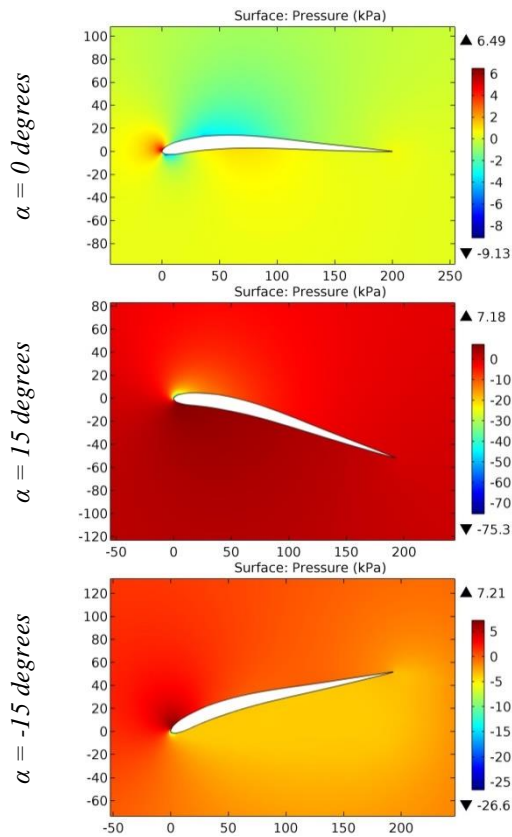


Figure 37. The pressure contours on the surfaces of the GOE 393 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

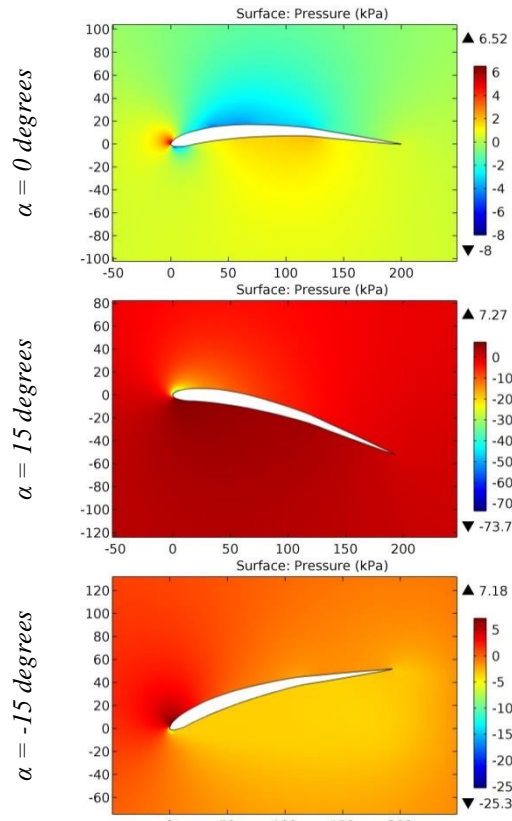


Figure 38. The pressure contours on the surfaces of the GOE 394 airfoil.

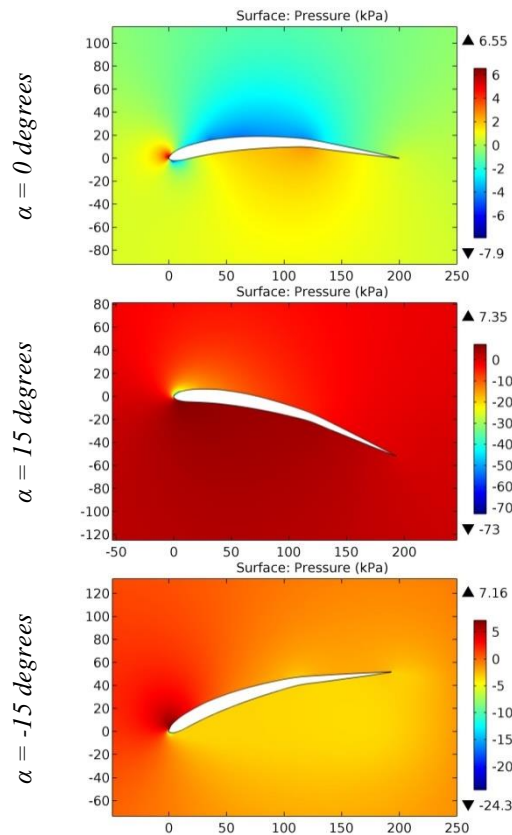


Figure 39. The pressure contours on the surfaces of the GOE 395 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

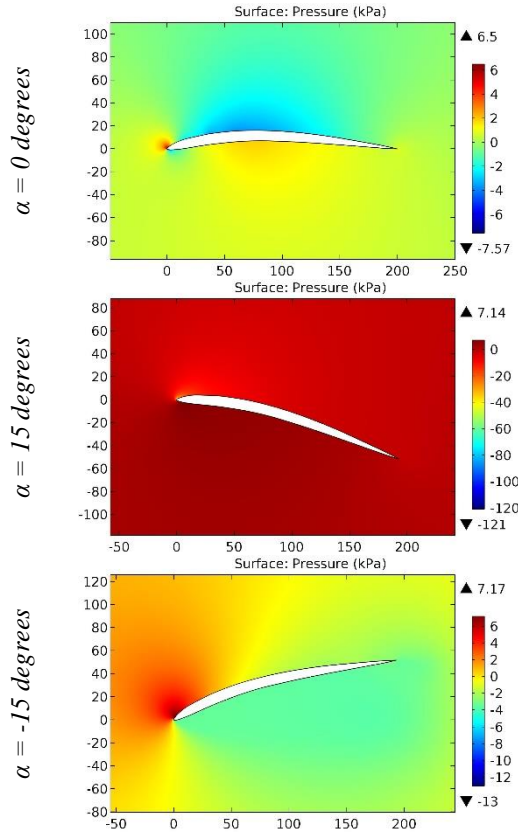


Figure 40. The pressure contours on the surfaces of the GOE 396 airfoil.

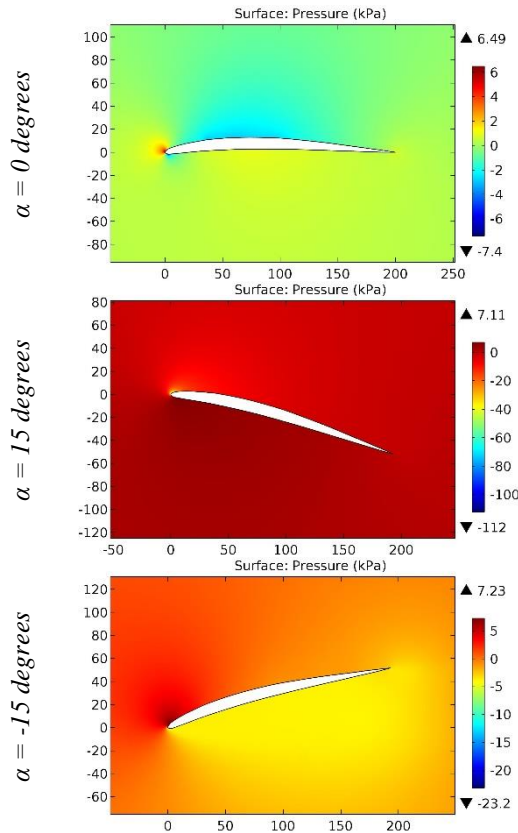


Figure 41. The pressure contours on the surfaces of the GOE 397 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

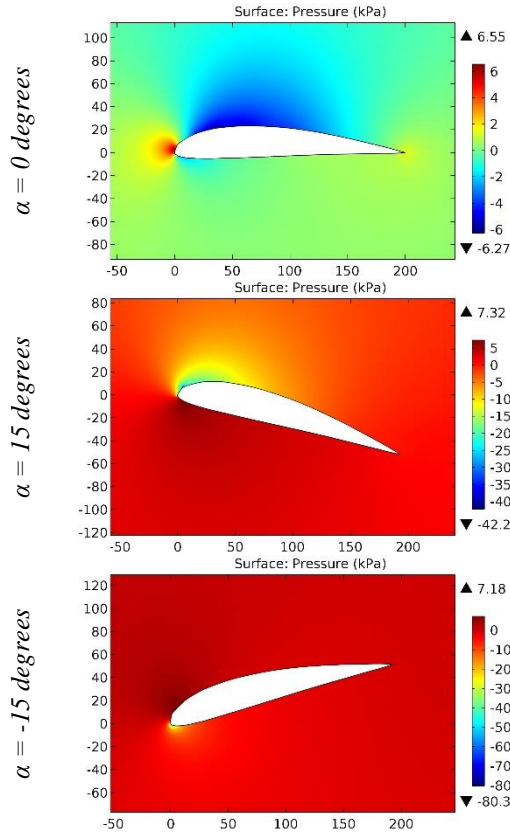


Figure 42. The pressure contours on the surfaces of the GOE 398 airfoil.

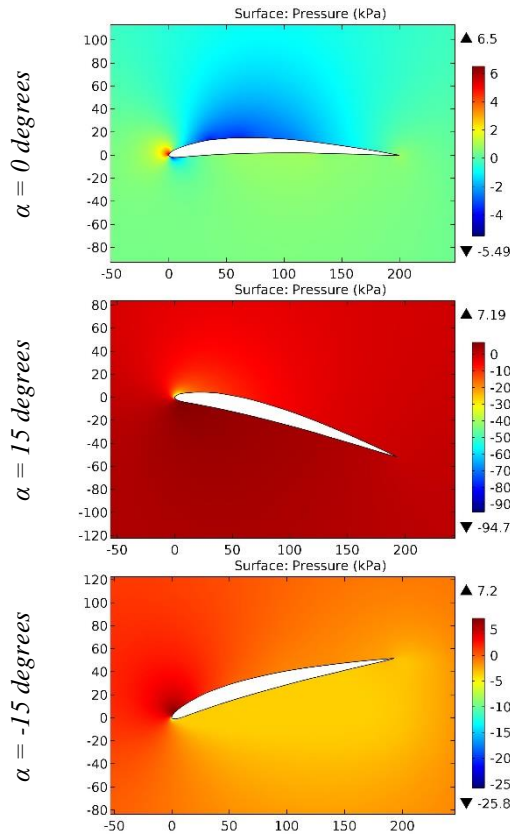


Figure 43. The pressure contours on the surfaces of the GOE 399 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

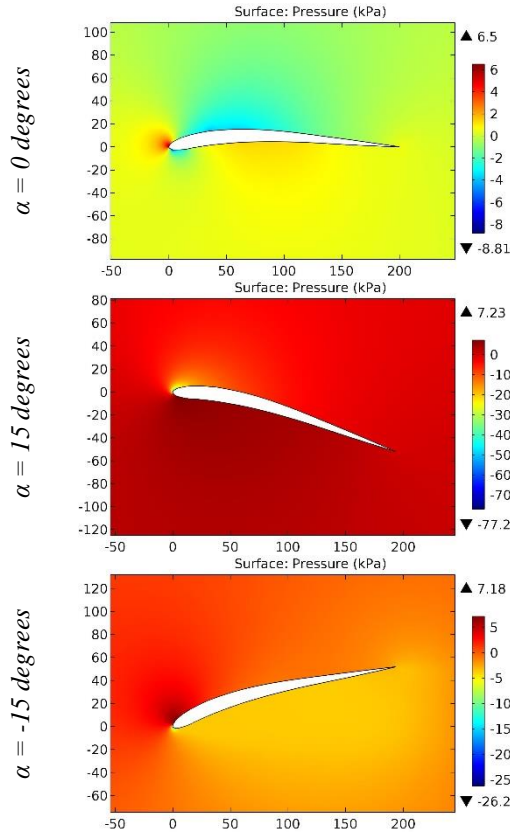


Figure 44. The pressure contours on the surfaces of the GOE 400 airfoil.

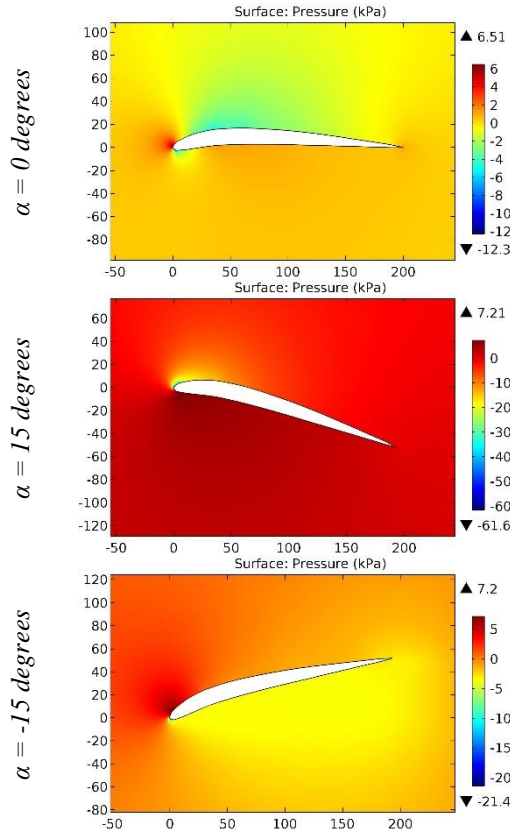


Figure 45. The pressure contours on the surfaces of the GOE 401 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

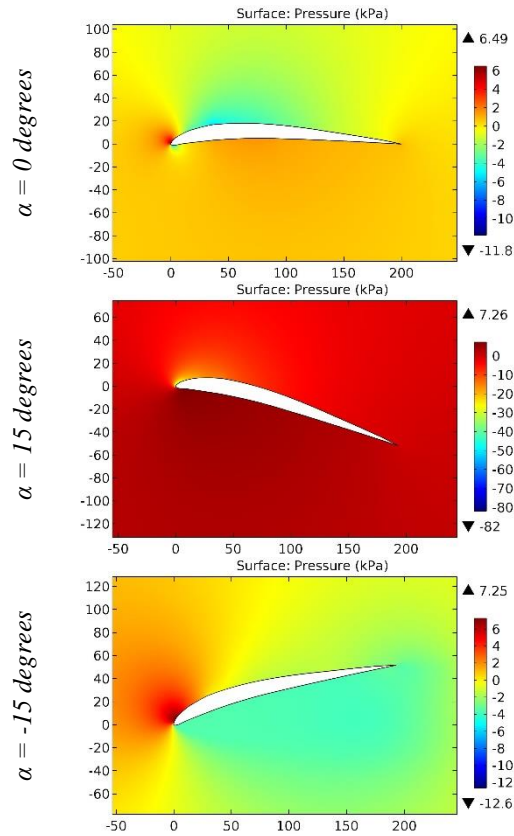


Figure 46. The pressure contours on the surfaces of the GOE 402 airfoil.

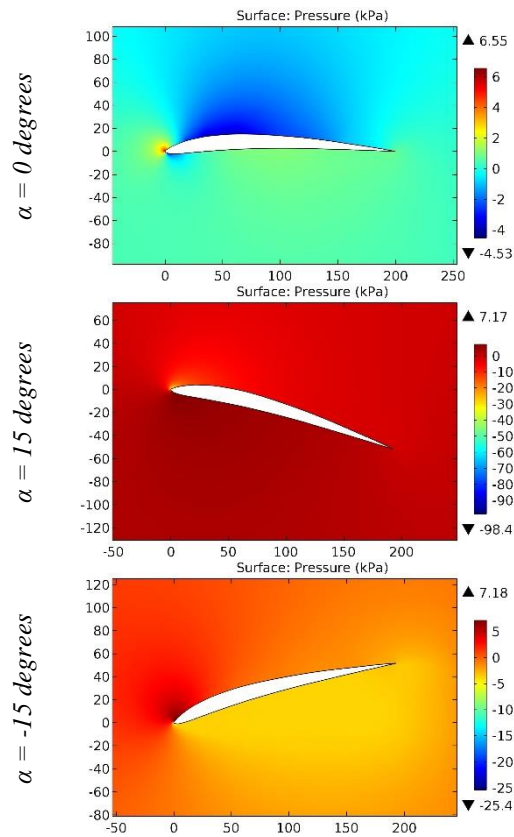


Figure 47. The pressure contours on the surfaces of the GOE 403 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

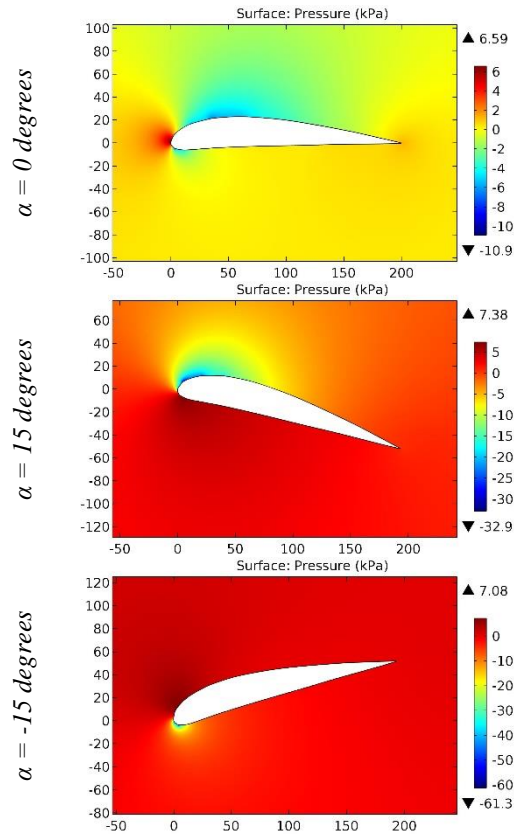


Figure 48. The pressure contours on the surfaces of the GOE 404 airfoil.

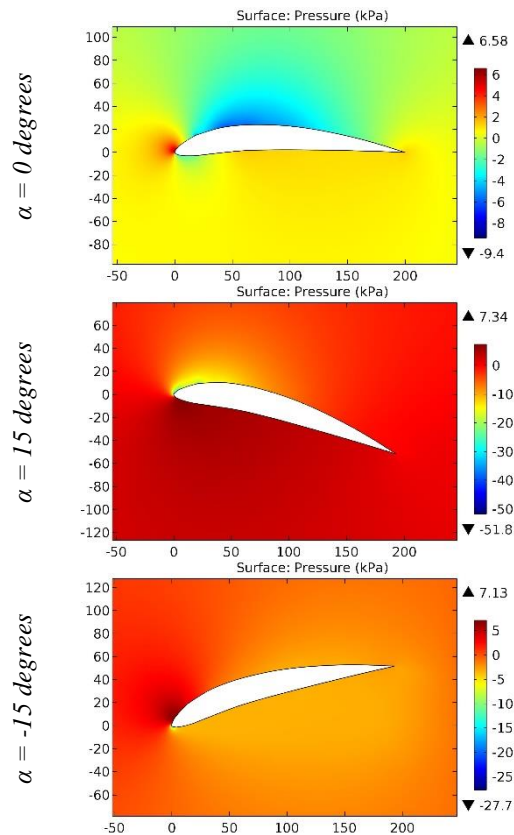


Figure 49. The pressure contours on the surfaces of the GOE 405 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

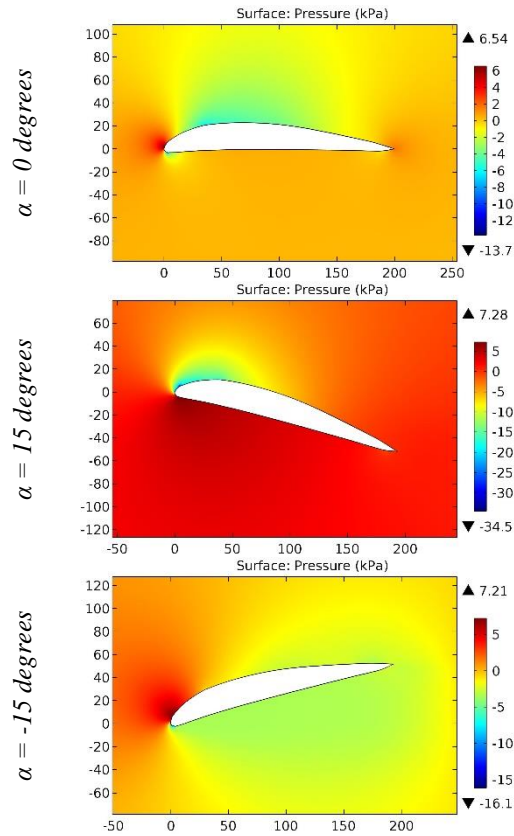


Figure 50. The pressure contours on the surfaces of the GOE 406 airfoil.

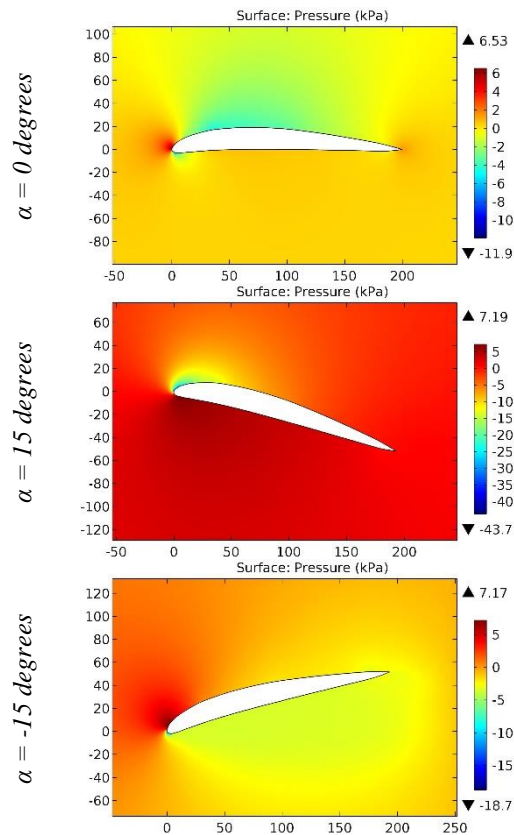


Figure 51. The pressure contours on the surfaces of the GOE 407 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

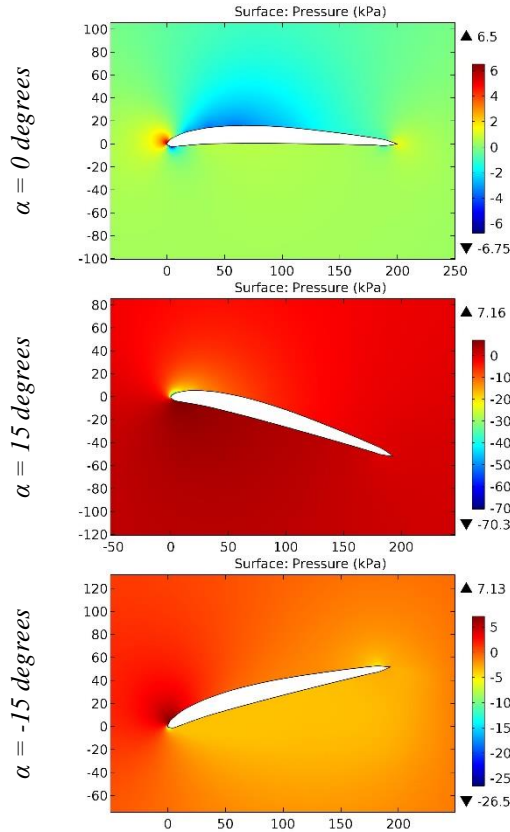


Figure 52. The pressure contours on the surfaces of the GOE 408 airfoil.

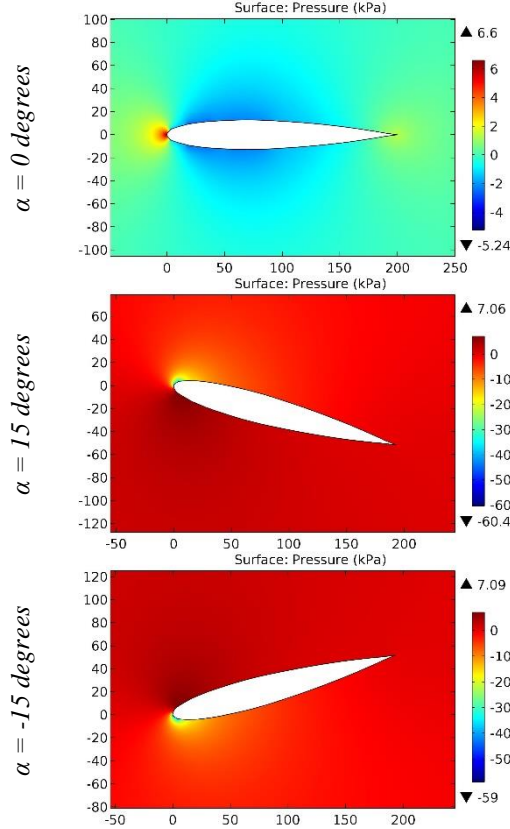


Figure 53. The pressure contours on the surfaces of the GOE 409 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

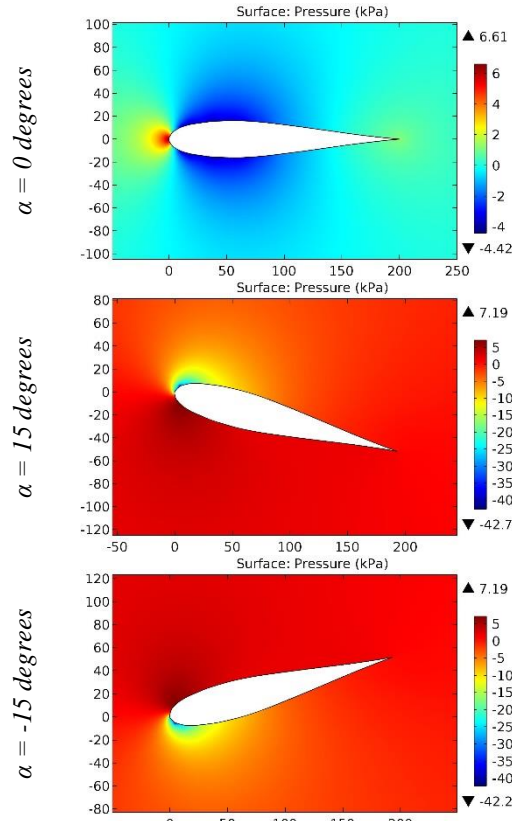


Figure 54. The pressure contours on the surfaces of the GOE 410 airfoil.

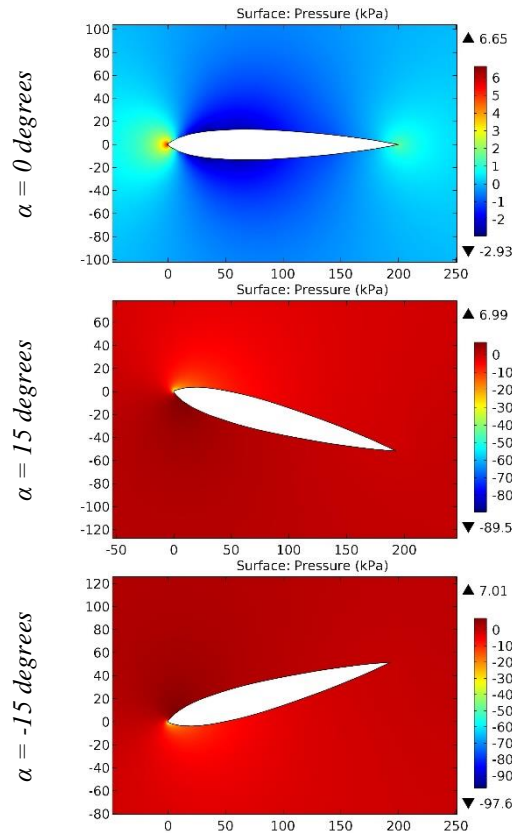


Figure 55. The pressure contours on the surfaces of the GOE 411 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

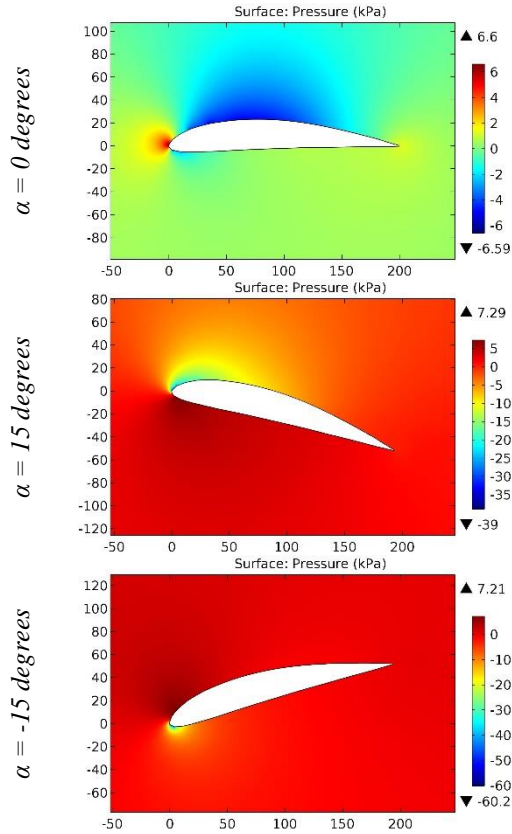


Figure 56. The pressure contours on the surfaces of the GOE 412 airfoil.

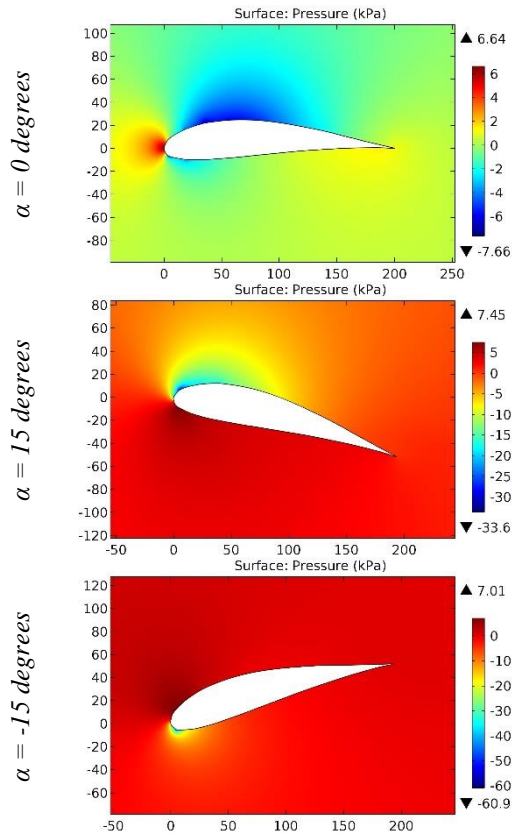


Figure 57. The pressure contours on the surfaces of the GOE 413 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

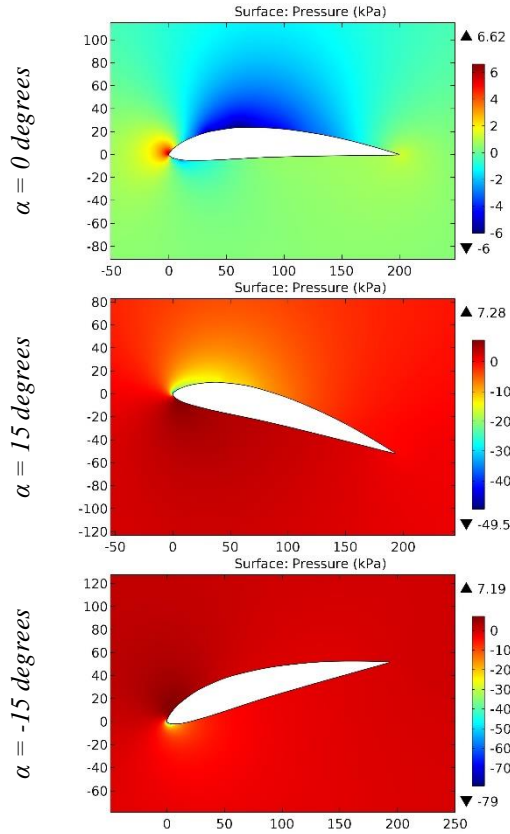


Figure 58. The pressure contours on the surfaces of the GOE 414 airfoil.

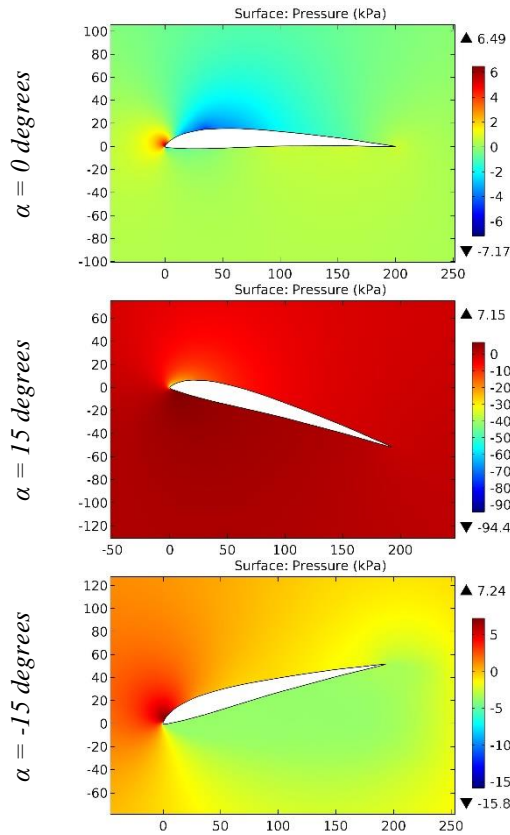


Figure 59. The pressure contours on the surfaces of the GOE 415 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

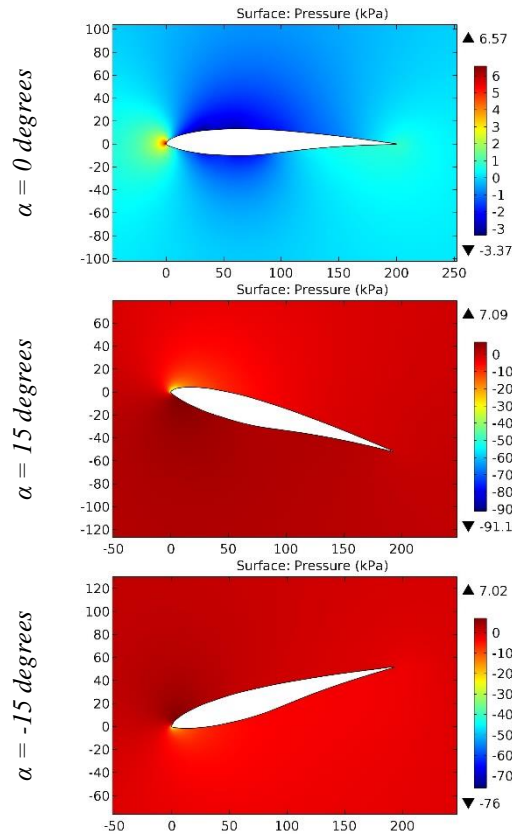


Figure 60. The pressure contours on the surfaces of the GOE 416A airfoil.

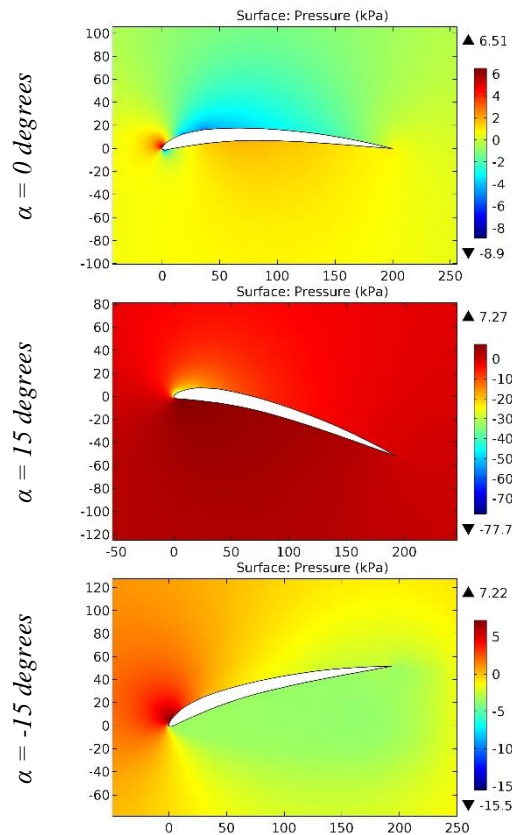


Figure 61. The pressure contours on the surfaces of the GOE 417 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

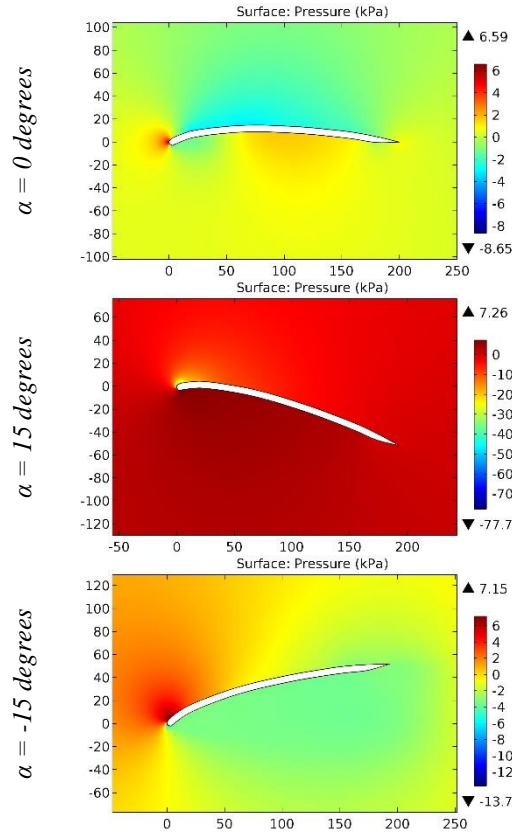


Figure 62. The pressure contours on the surfaces of the GOE 417A (GEW, PLATTE) airfoil.

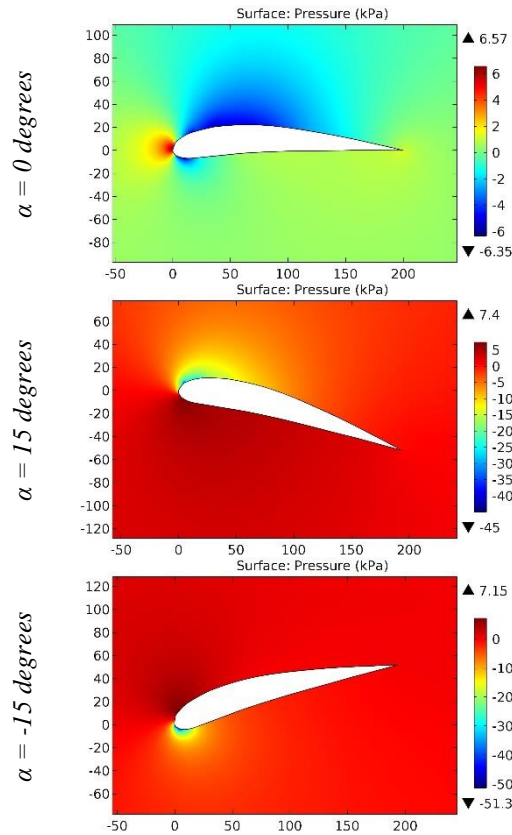


Figure 63. The pressure contours on the surfaces of the GOE 418 airfoil.

Impact Factor:

ISRA (India)	= 6.317	SIS (USA)	= 0.912	ICV (Poland)	= 6.630
ISI (Dubai, UAE)	= 1.582	ПИИЦ (Russia)	= 3.939	PIF (India)	= 1.940
GIF (Australia)	= 0.564	ESJI (KZ)	= 9.035	IBI (India)	= 4.260
JIF	= 1.500	SJIF (Morocco)	= 7.184	OAJI (USA)	= 0.350

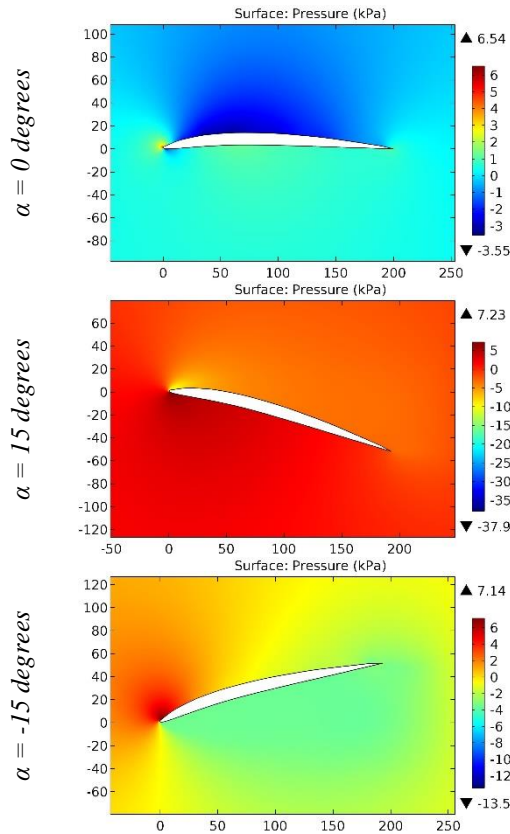


Figure 64. The pressure contours on the surfaces of the GOE 419 airfoil.

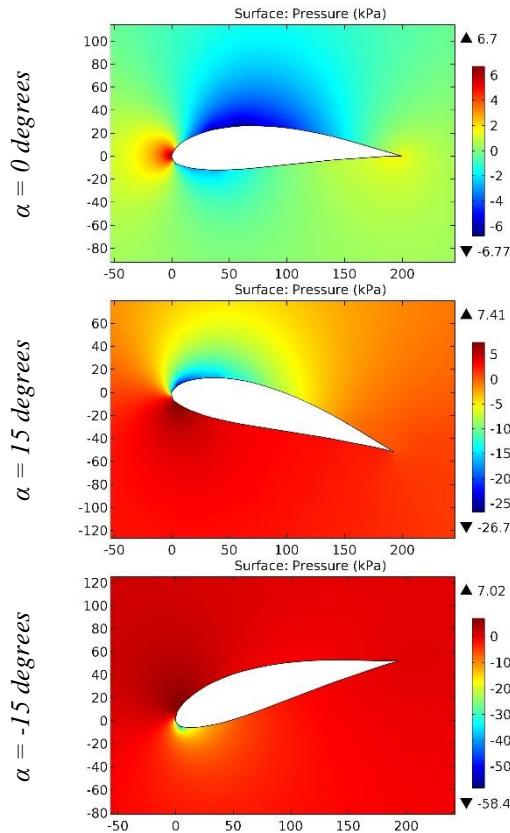


Figure 65. The pressure contours on the surfaces of the GOE 420 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

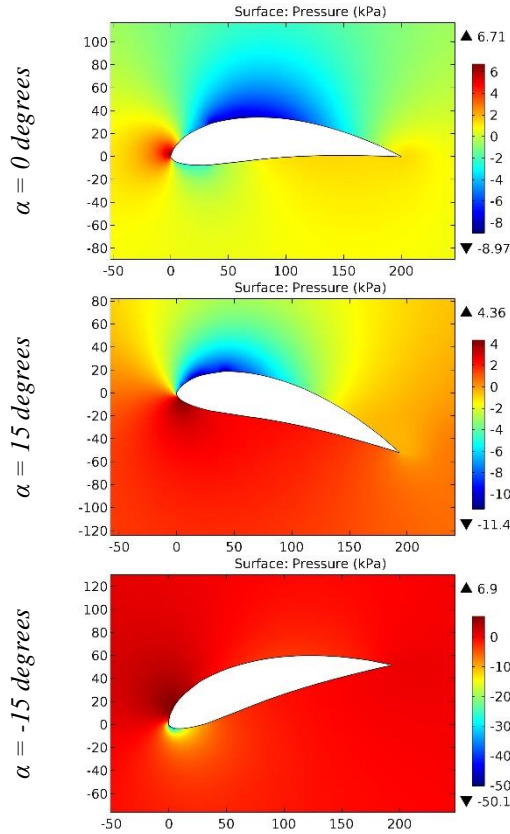


Figure 66. The pressure contours on the surfaces of the GOE 421 airfoil.

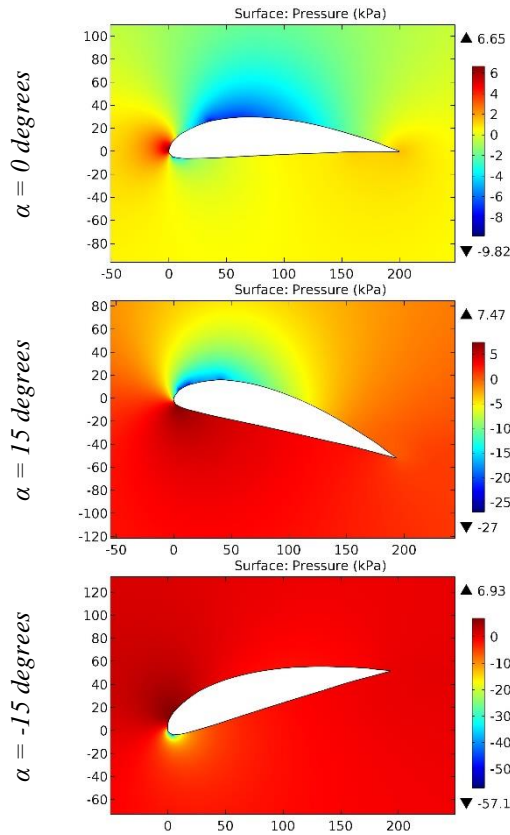


Figure 67. The pressure contours on the surfaces of the GOE 422 airfoil.

Impact Factor:

SISRA (India)	= 6.317	SIS (USA)	= 0.912	ICV (Poland)	= 6.630
ISI (Dubai, UAE)	= 1.582	ПИИЦ (Russia)	= 3.939	PIF (India)	= 1.940
GIF (Australia)	= 0.564	ESJI (KZ)	= 9.035	IBI (India)	= 4.260
JIF	= 1.500	SJIF (Morocco)	= 7.184	OAJI (USA)	= 0.350

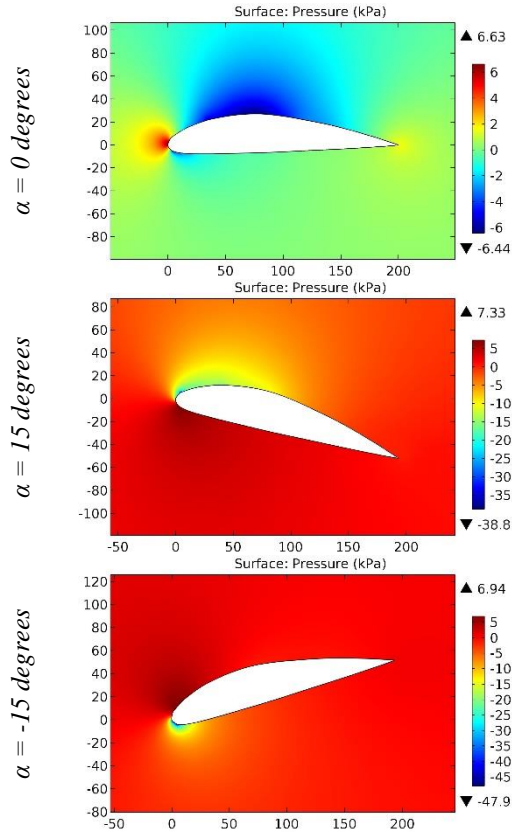


Figure 68. The pressure contours on the surfaces of the GOE 423 airfoil.

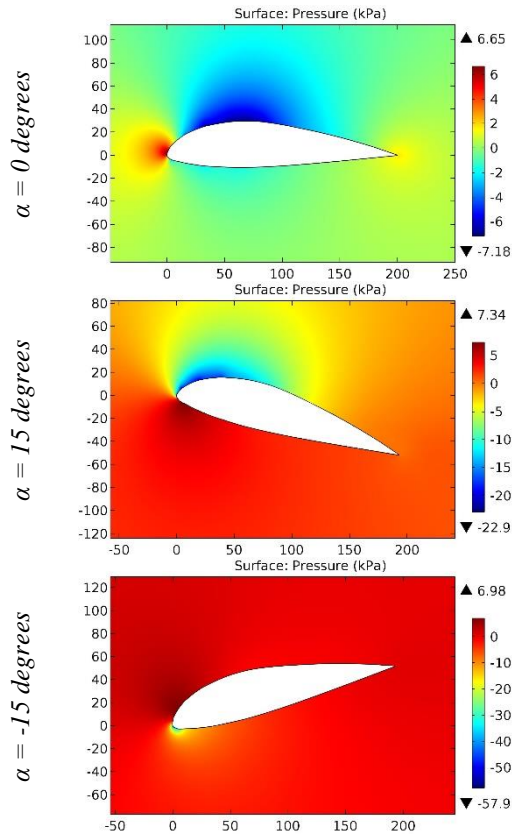


Figure 69. The pressure contours on the surfaces of the GOE 424 airfoil.

Impact Factor:

ISRA (India)	= 6.317	SIS (USA)	= 0.912	ICV (Poland)	= 6.630
ISI (Dubai, UAE)	= 1.582	ПИИЦ (Russia)	= 3.939	PIF (India)	= 1.940
GIF (Australia)	= 0.564	ESJI (KZ)	= 9.035	IBI (India)	= 4.260
JIF	= 1.500	SJIF (Morocco)	= 7.184	OAJI (USA)	= 0.350

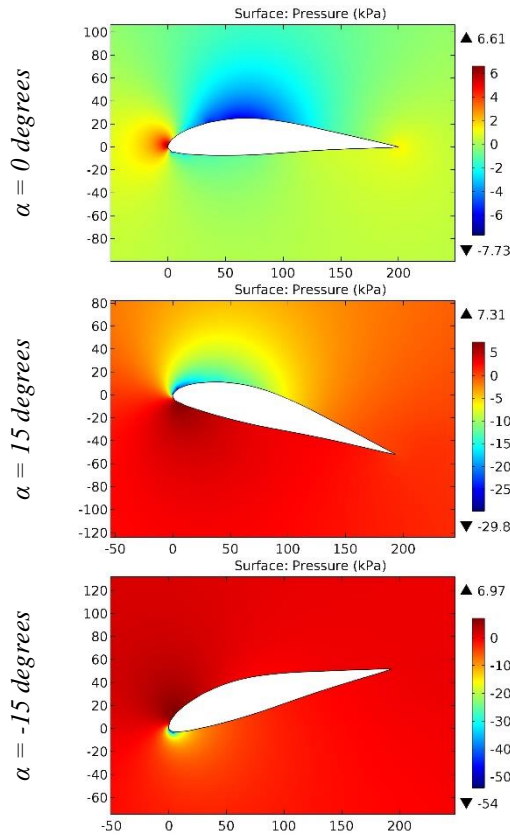


Figure 70. The pressure contours on the surfaces of the GOE 425 airfoil.

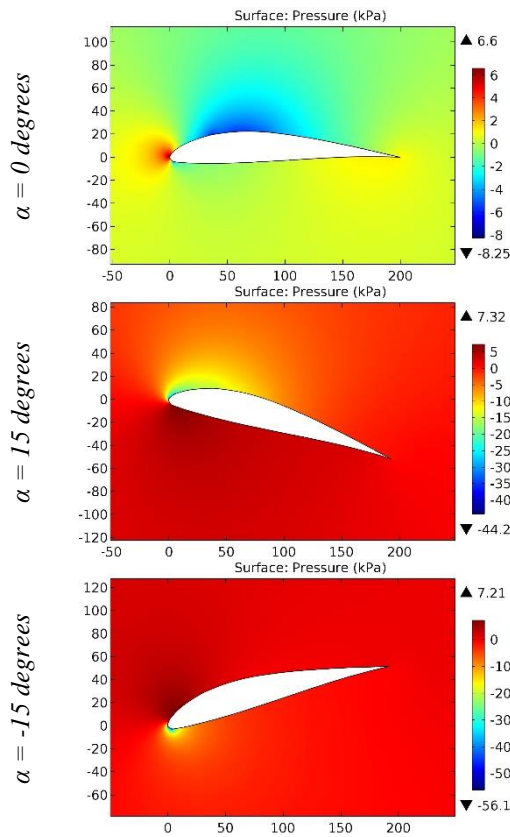


Figure 71. The pressure contours on the surfaces of the GOE 426 airfoil.

Impact Factor:

ISRA (India)	= 6.317	SIS (USA)	= 0.912	ICV (Poland)	= 6.630
ISI (Dubai, UAE)	= 1.582	ПИИЦ (Russia)	= 3.939	PIF (India)	= 1.940
GIF (Australia)	= 0.564	ESJI (KZ)	= 9.035	IBI (India)	= 4.260
JIF	= 1.500	SJIF (Morocco)	= 7.184	OAJI (USA)	= 0.350

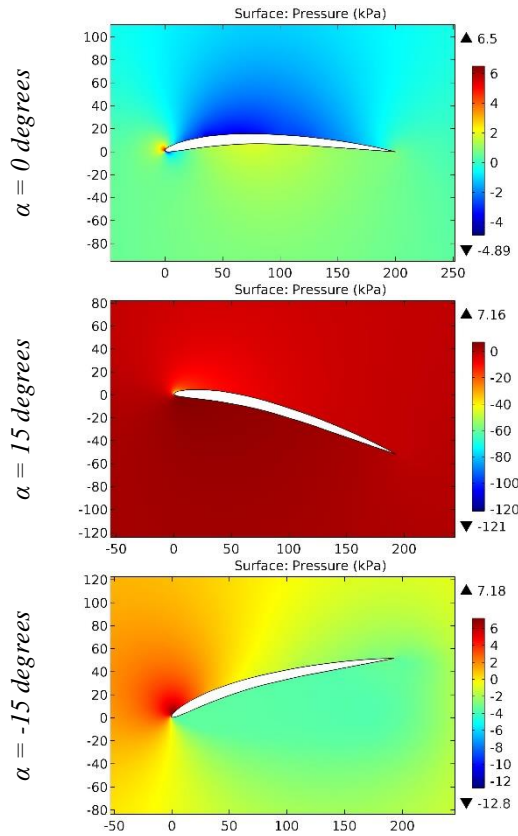


Figure 72. The pressure contours on the surfaces of the GOE 427 airfoil.

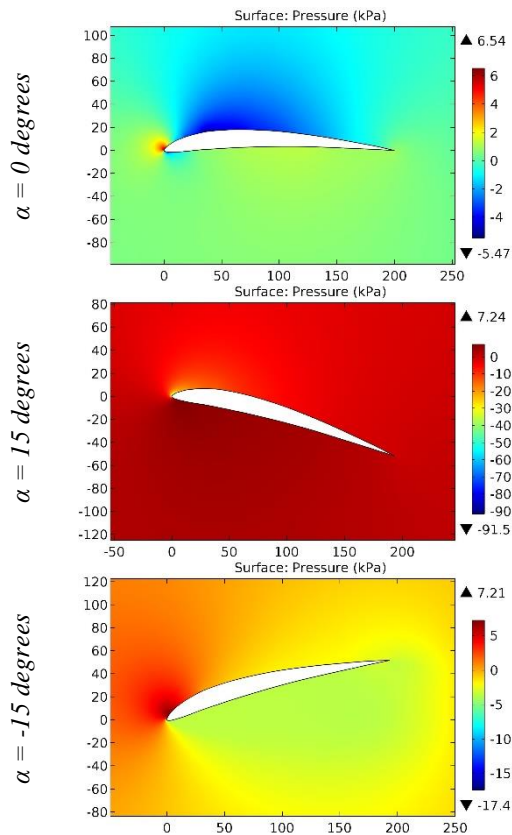


Figure 73. The pressure contours on the surfaces of the GOE 428 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

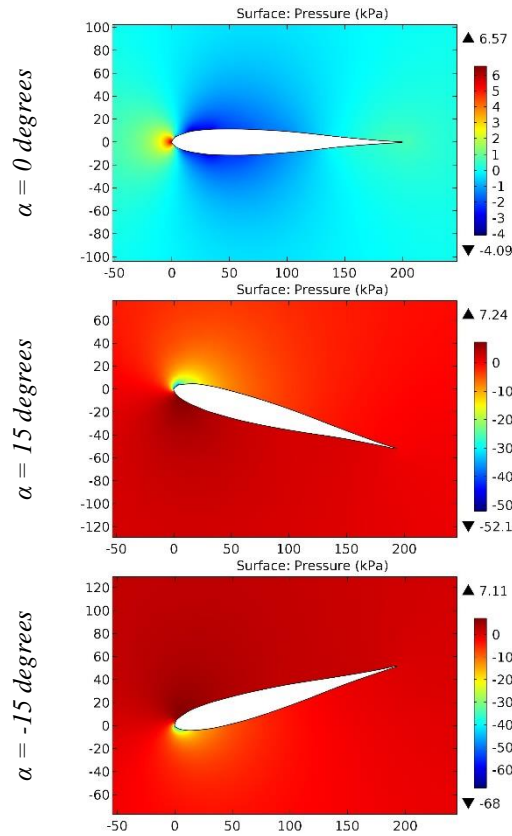


Figure 74. The pressure contours on the surfaces of the GOE 429 airfoil.

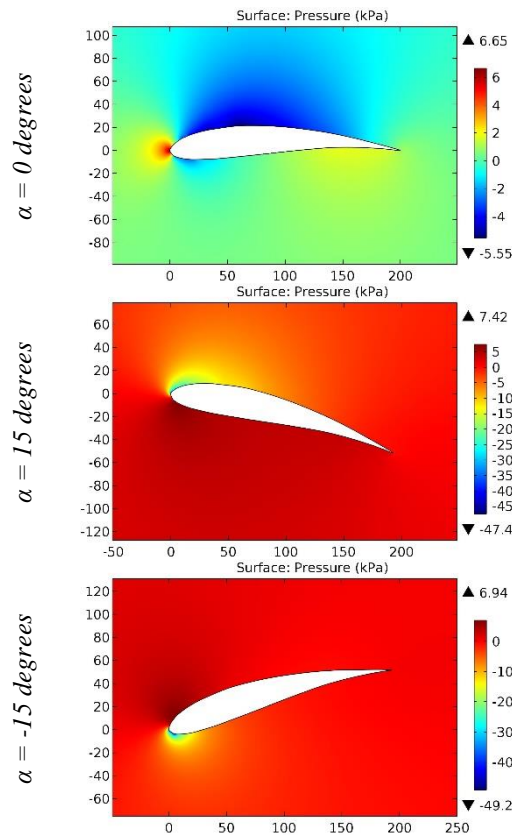


Figure 75. The pressure contours on the surfaces of the GOE 430 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

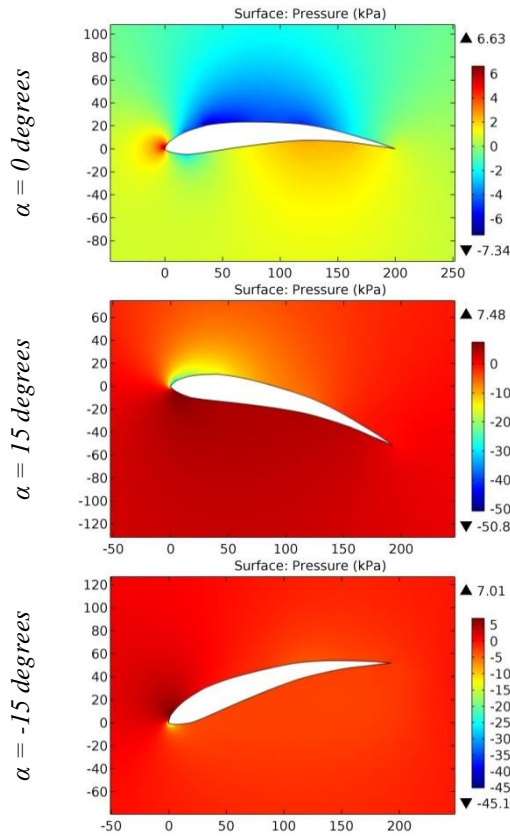


Figure 76. The pressure contours on the surfaces of the GOE 431 airfoil.

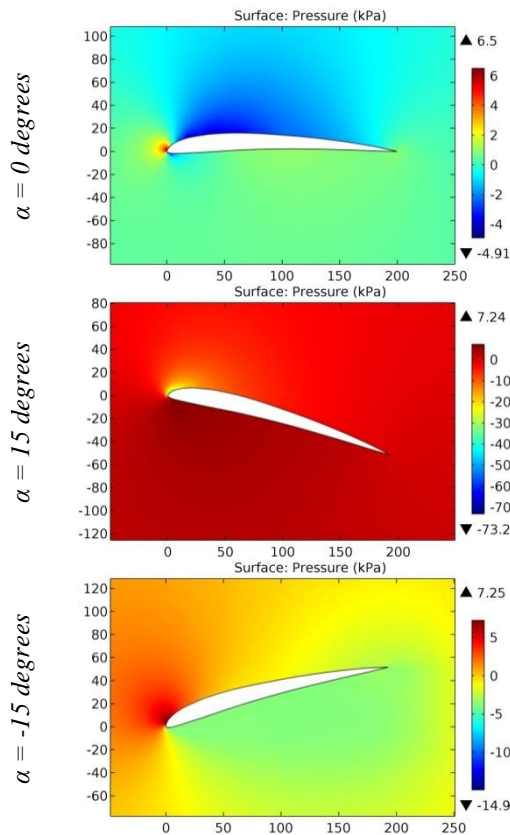


Figure 77. The pressure contours on the surfaces of the GOE 432 airfoil.

Impact Factor:

ISRA (India)	= 6.317	SIS (USA)	= 0.912	ICV (Poland)	= 6.630
ISI (Dubai, UAE)	= 1.582	ПИИЦ (Russia)	= 3.939	PIF (India)	= 1.940
GIF (Australia)	= 0.564	ESJI (KZ)	= 9.035	IBI (India)	= 4.260
JIF	= 1.500	SJIF (Morocco)	= 7.184	OAJI (USA)	= 0.350

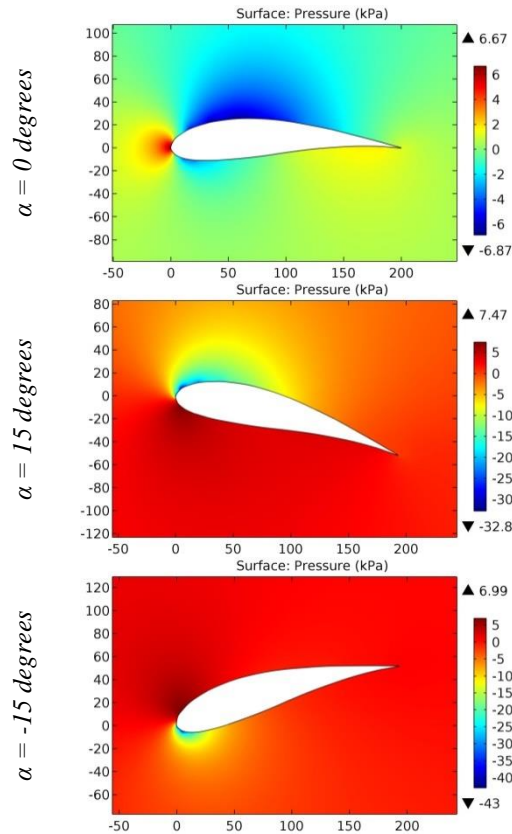


Figure 78. The pressure contours on the surfaces of the GOE 433 airfoil.

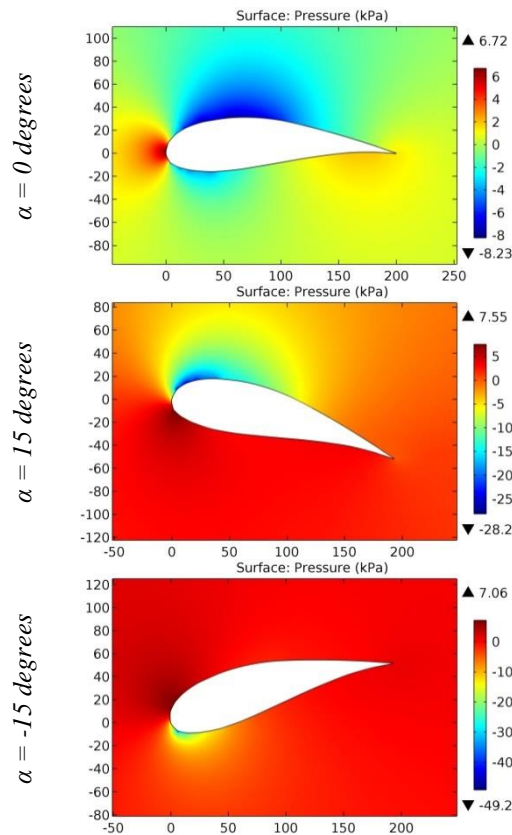


Figure 79. The pressure contours on the surfaces of the GOE 434 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

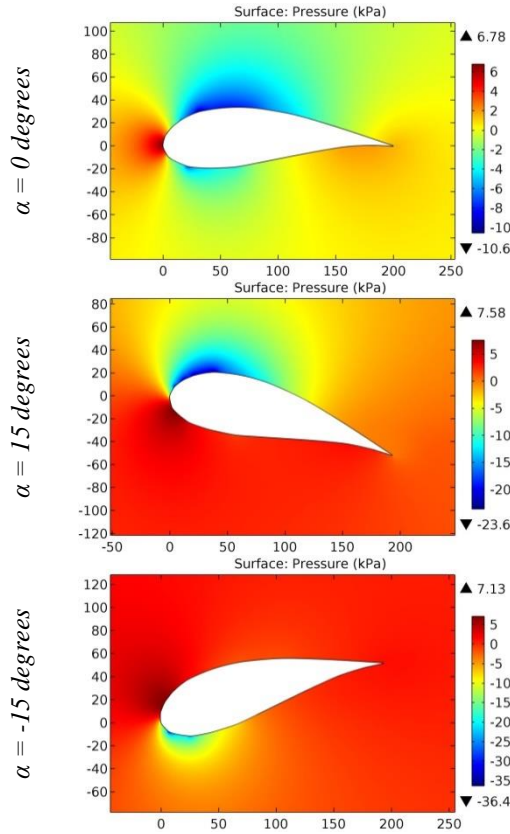


Figure 80. The pressure contours on the surfaces of the GOE 435 airfoil.

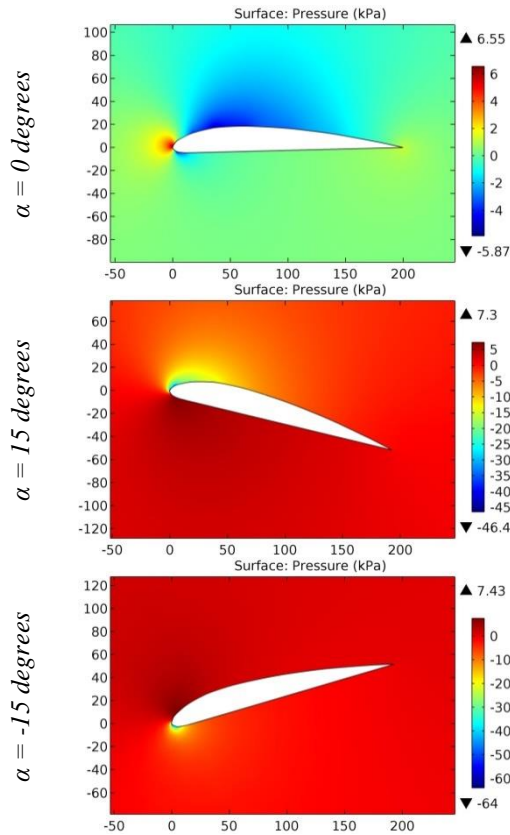


Figure 81. The pressure contours on the surfaces of the GOE 436 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

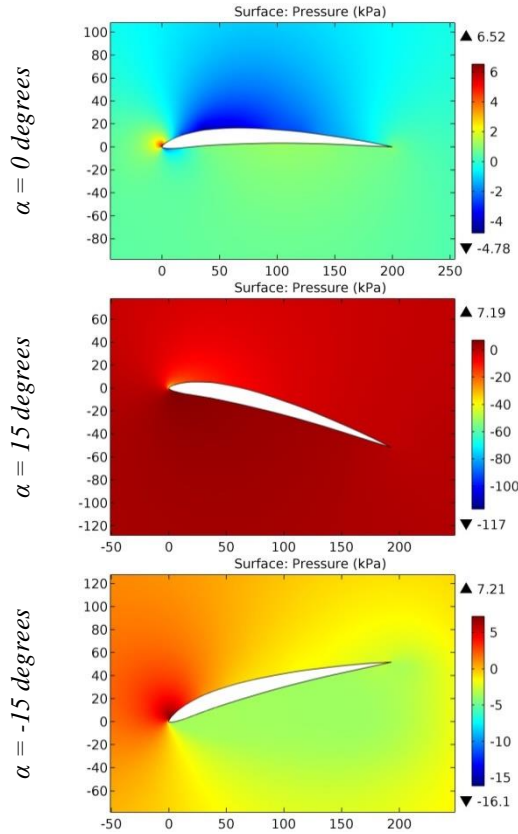


Figure 82. The pressure contours on the surfaces of the GOE 437 airfoil.

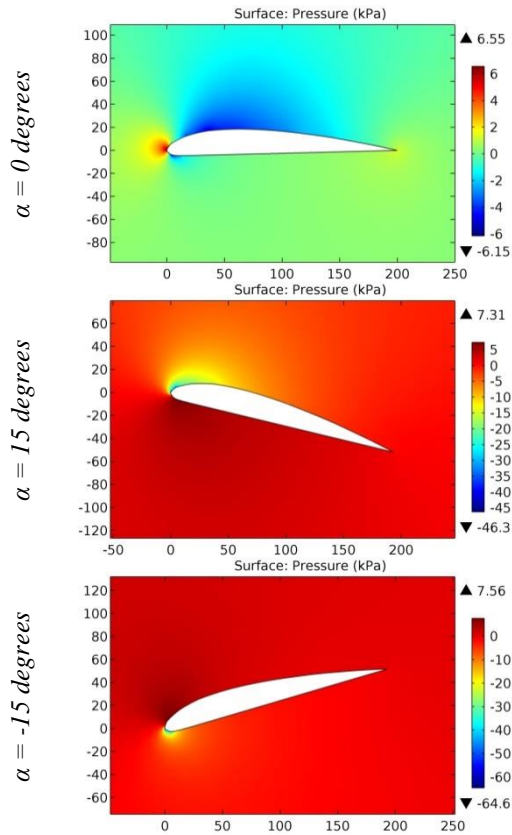


Figure 83. The pressure contours on the surfaces of the GOE 438 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

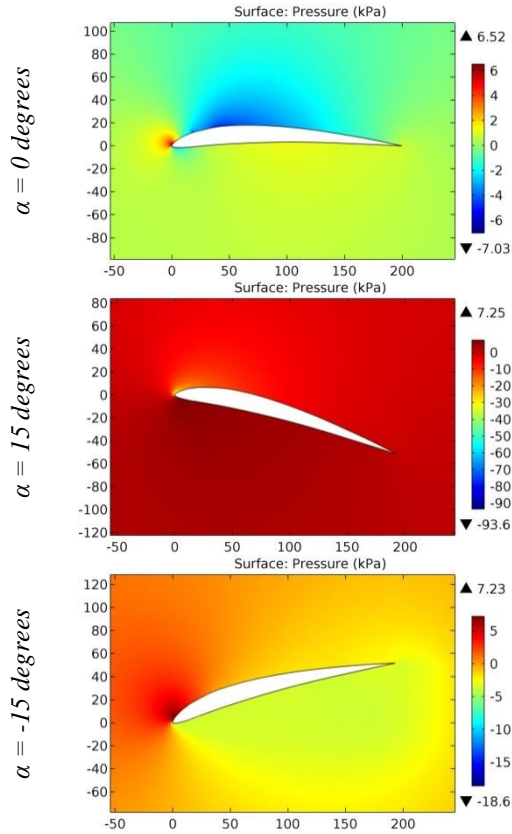


Figure 84. The pressure contours on the surfaces of the GOE 439 airfoil.

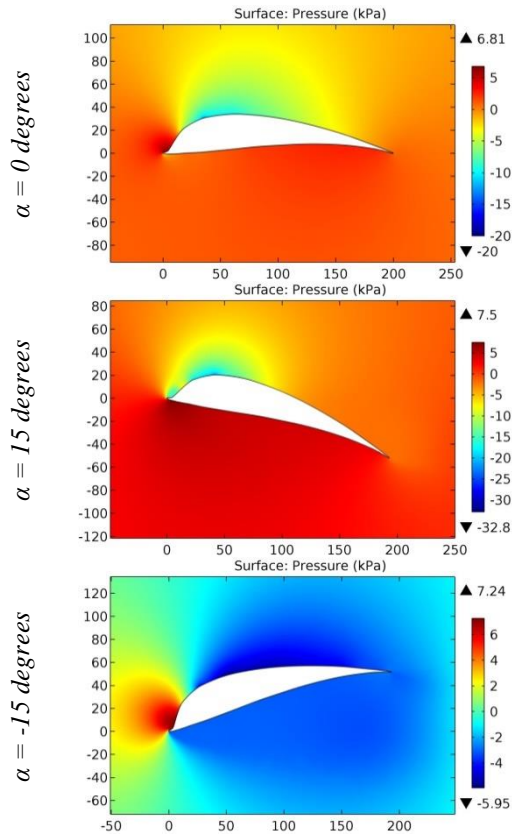


Figure 85. The pressure contours on the surfaces of the GOE 440 airfoil.

Impact Factor:

SISRA (India)	= 6.317	SIS (USA)	= 0.912	ICV (Poland)	= 6.630
ISI (Dubai, UAE)	= 1.582	ПИИЦ (Russia)	= 3.939	PIF (India)	= 1.940
GIF (Australia)	= 0.564	ESJI (KZ)	= 9.035	IBI (India)	= 4.260
JIF	= 1.500	SJIF (Morocco)	= 7.184	OAJI (USA)	= 0.350

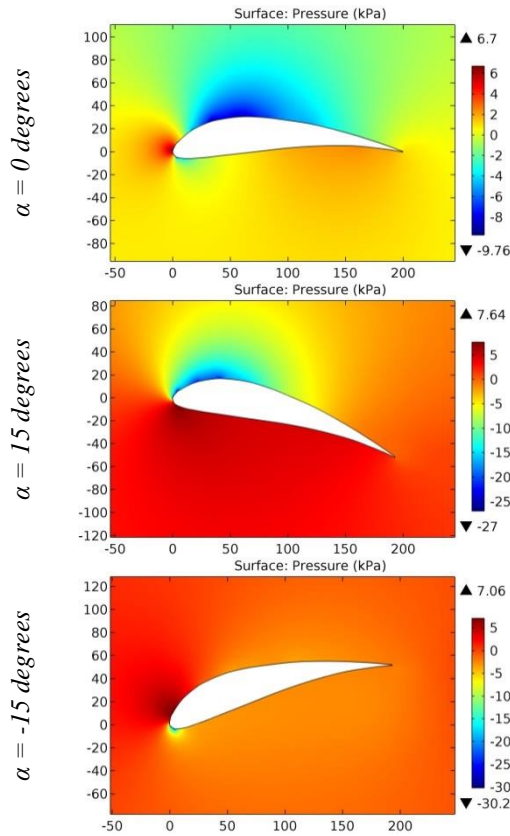


Figure 86. The pressure contours on the surfaces of the GOE 441 airfoil.

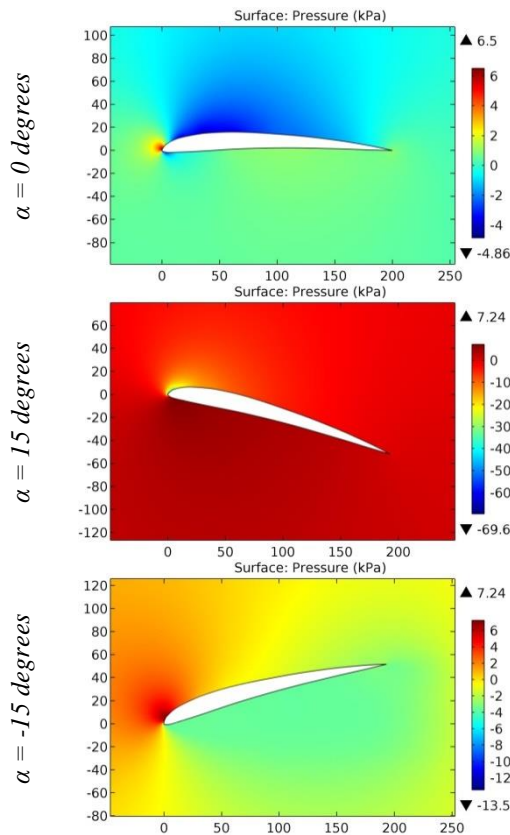


Figure 87. The pressure contours on the surfaces of the GOE 442 airfoil.

Impact Factor:

SISRA (India)	= 6.317	SIS (USA)	= 0.912	ICV (Poland)	= 6.630
ISI (Dubai, UAE)	= 1.582	ПИИЦ (Russia)	= 3.939	PIF (India)	= 1.940
GIF (Australia)	= 0.564	ESJI (KZ)	= 9.035	IBI (India)	= 4.260
JIF	= 1.500	SJIF (Morocco)	= 7.184	OAJI (USA)	= 0.350

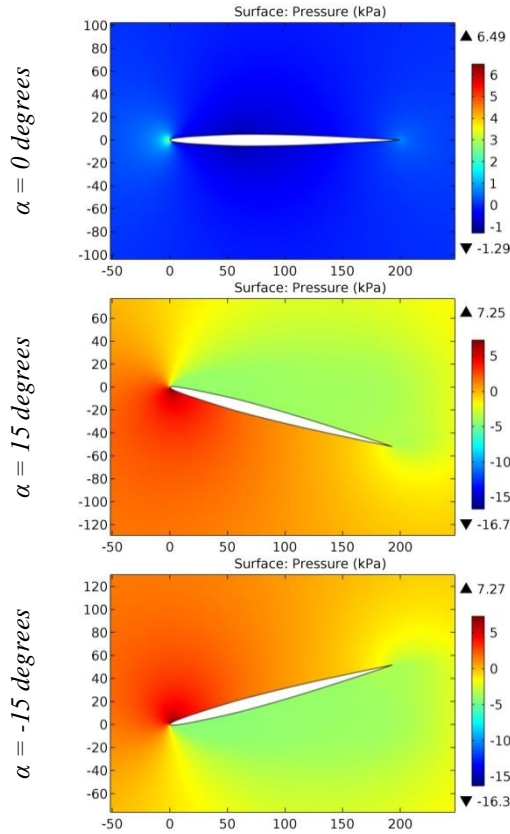


Figure 88. The pressure contours on the surfaces of the GOE 443 airfoil.

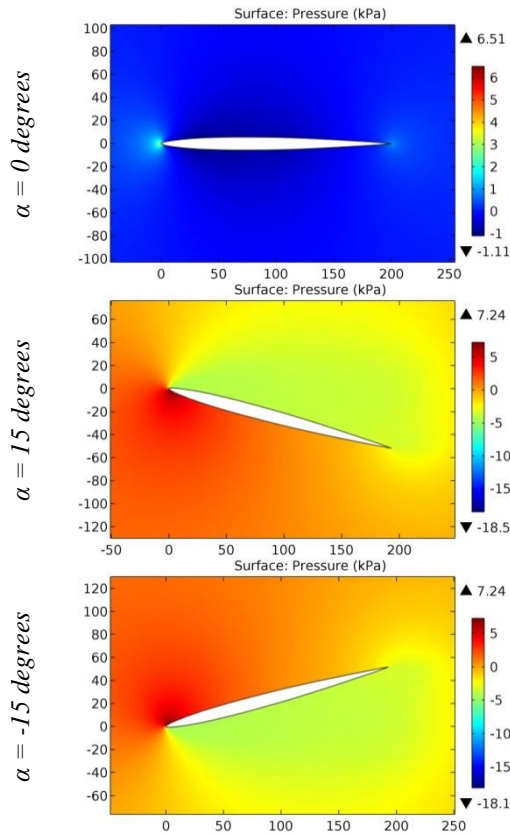


Figure 89. The pressure contours on the surfaces of the GOE 444 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

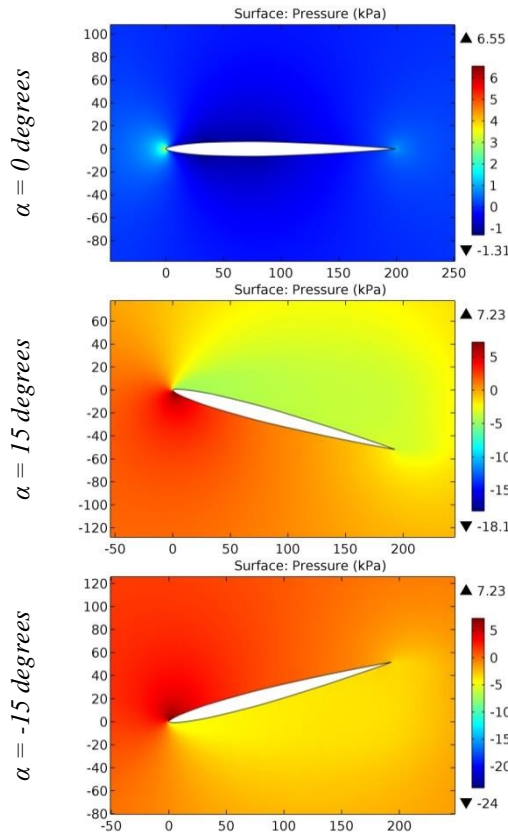


Figure 90. The pressure contours on the surfaces of the GOE 445 airfoil.

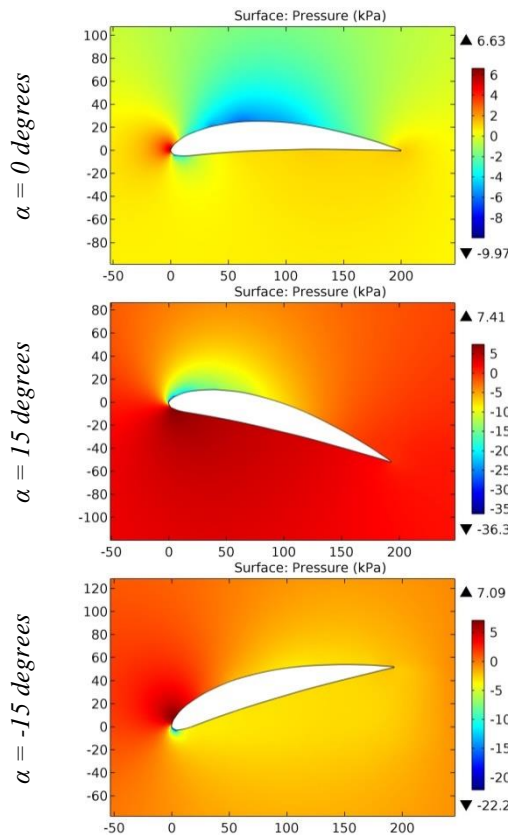


Figure 91. The pressure contours on the surfaces of the GOE 446 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

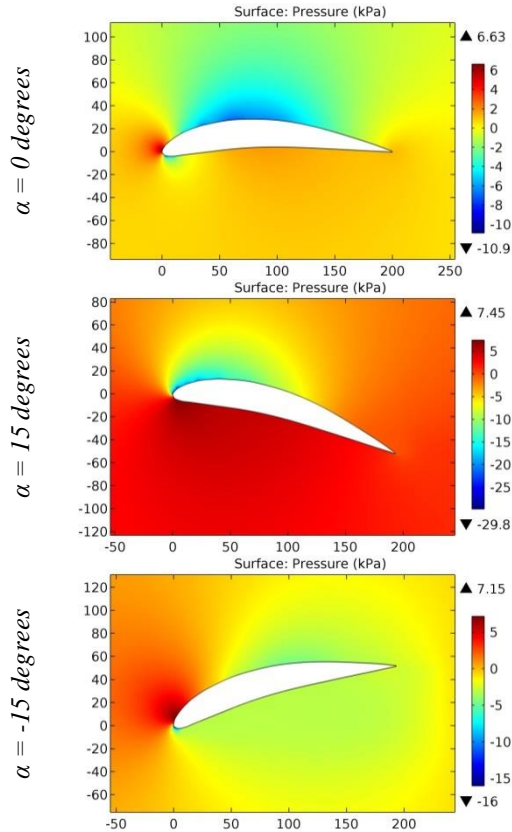


Figure 92. The pressure contours on the surfaces of the GOE 447 airfoil.

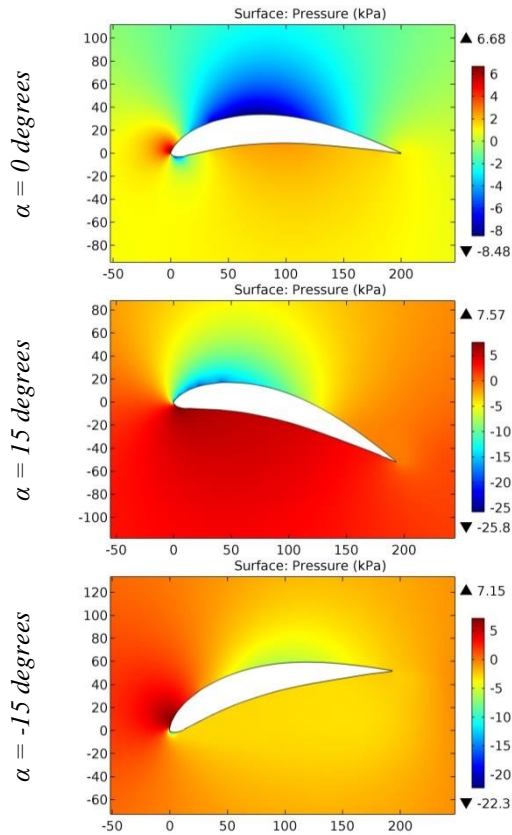


Figure 93. The pressure contours on the surfaces of the GOE 448 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

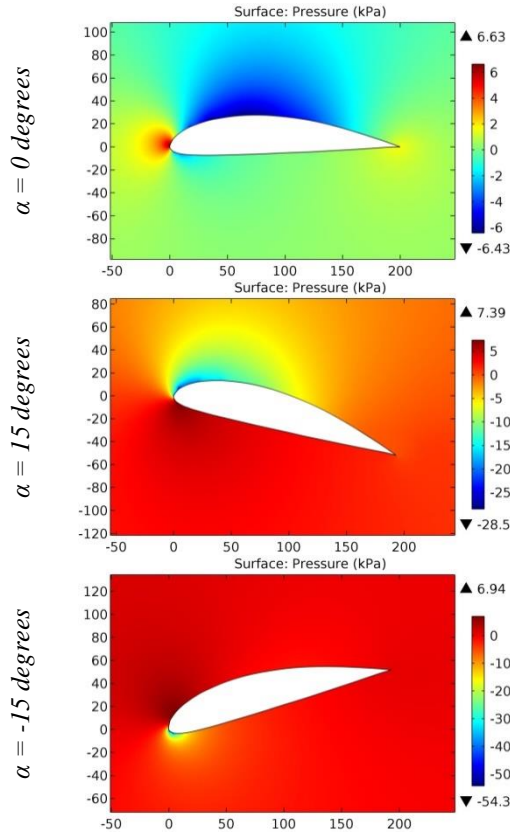


Figure 94. The pressure contours on the surfaces of the GOE 449 airfoil.

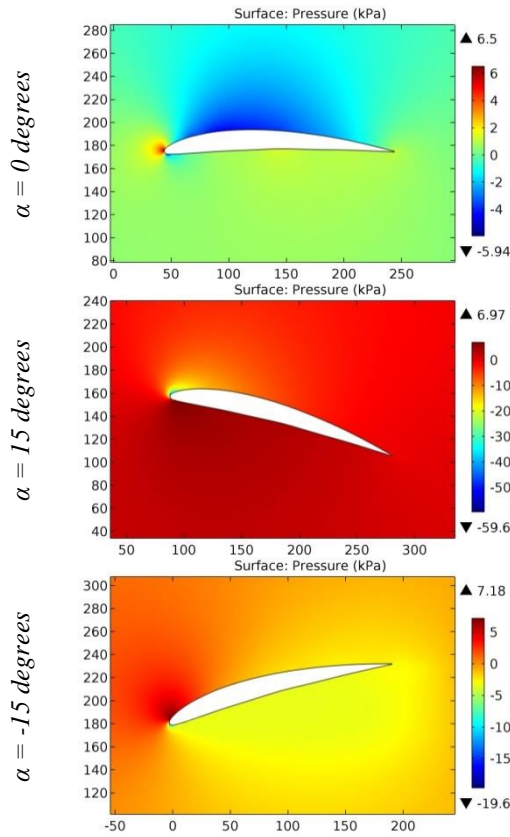


Figure 95. The pressure contours on the surfaces of the GOE 450 airfoil.

Impact Factor:

ISRA (India)	= 6.317	SIS (USA)	= 0.912	ICV (Poland)	= 6.630
ISI (Dubai, UAE)	= 1.582	ПИИЦ (Russia)	= 3.939	PIF (India)	= 1.940
GIF (Australia)	= 0.564	ESJI (KZ)	= 9.035	IBI (India)	= 4.260
JIF	= 1.500	SJIF (Morocco)	= 7.184	OAJI (USA)	= 0.350

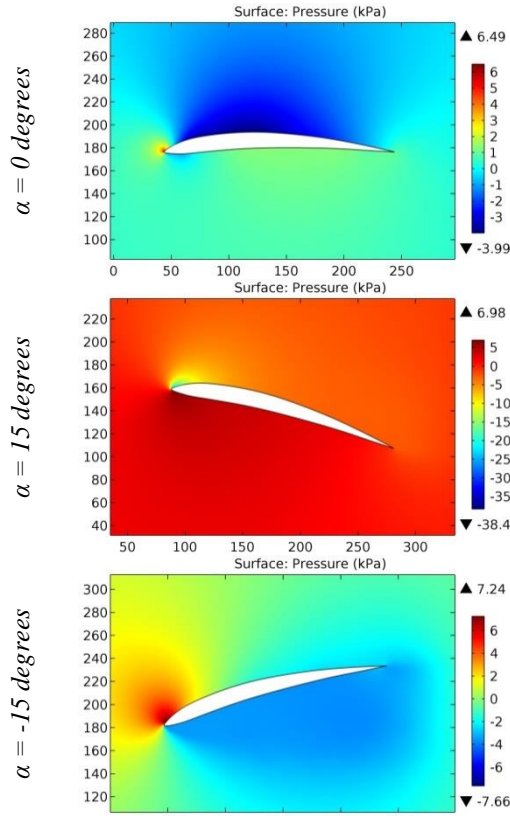


Figure 96. The pressure contours on the surfaces of the GOE 456 airfoil.

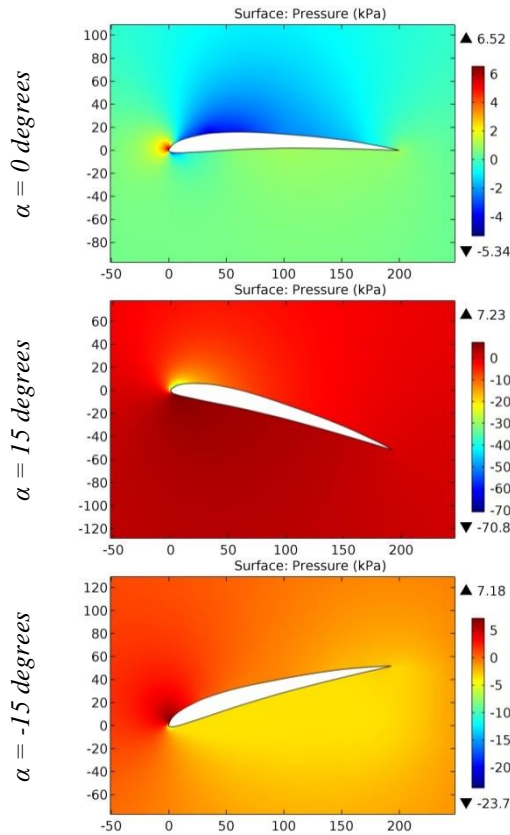


Figure 97. The pressure contours on the surfaces of the GOE 457 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

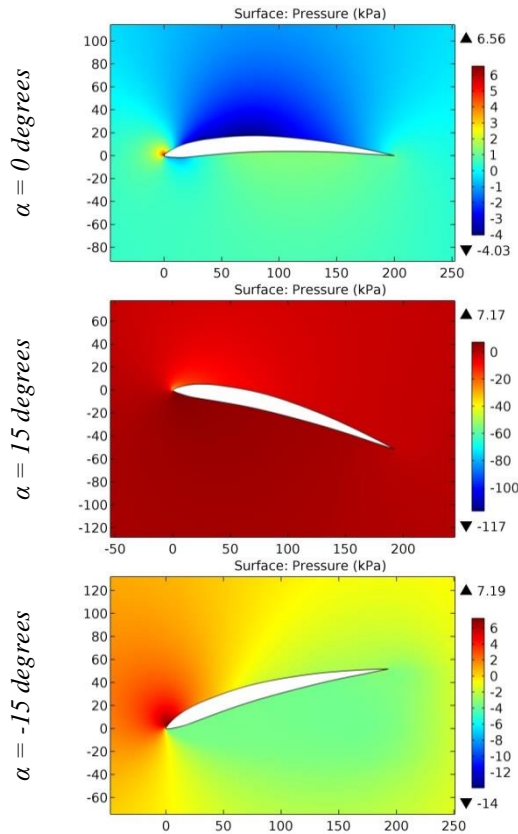


Figure 98. The pressure contours on the surfaces of the GOE 458 airfoil.

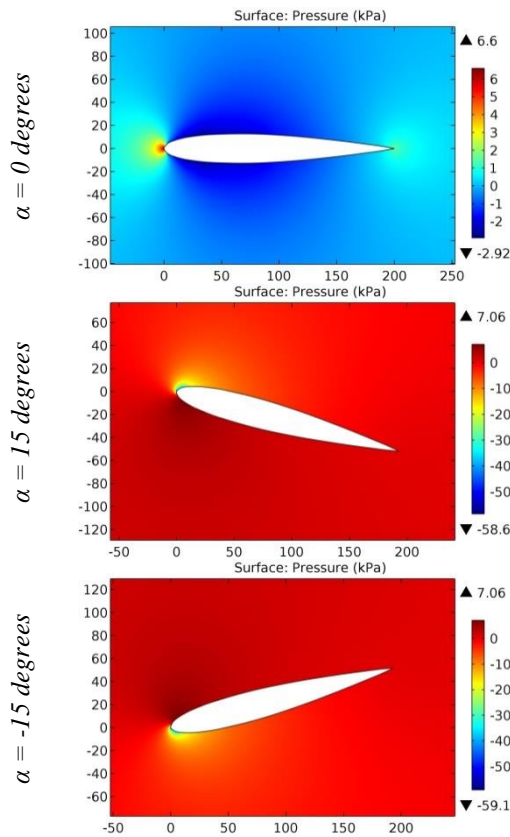


Figure 99. The pressure contours on the surfaces of the GOE 459 airfoil.

Impact Factor:

ISRA (India)	= 6.317	SIS (USA)	= 0.912	ICV (Poland)	= 6.630
ISI (Dubai, UAE)	= 1.582	ПИИЦ (Russia)	= 3.939	PIF (India)	= 1.940
GIF (Australia)	= 0.564	ESJI (KZ)	= 9.035	IBI (India)	= 4.260
JIF	= 1.500	SJIF (Morocco)	= 7.184	OAJI (USA)	= 0.350

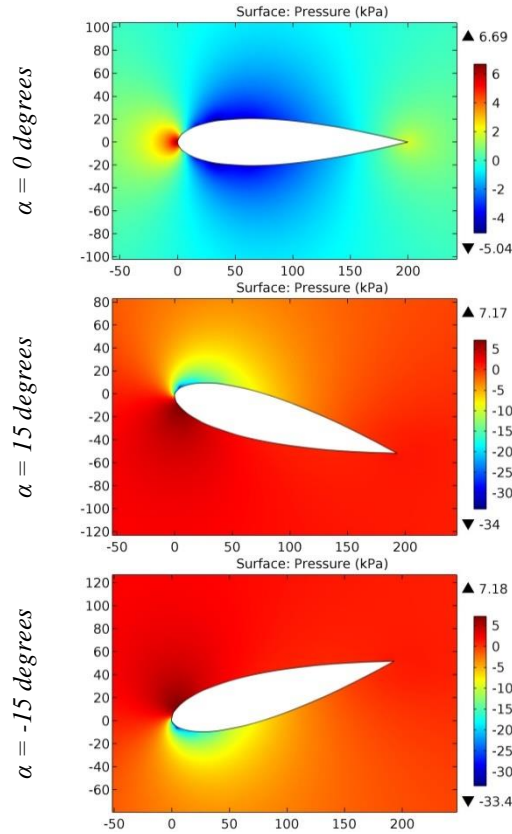


Figure 100. The pressure contours on the surfaces of the GOE 460 airfoil.

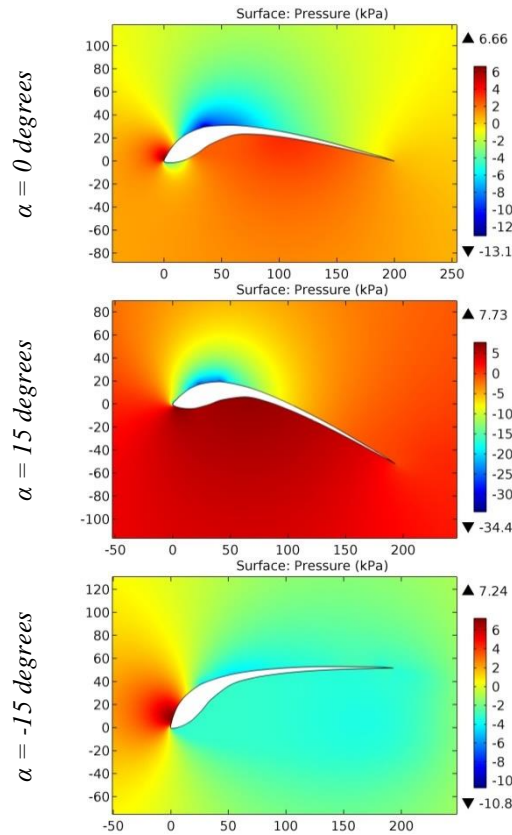


Figure 101. The pressure contours on the surfaces of the GOE 462 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

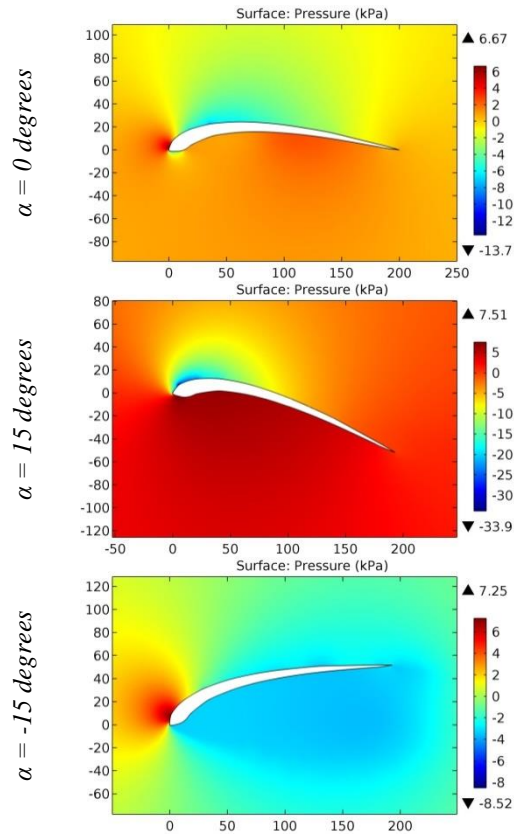


Figure 102. The pressure contours on the surfaces of the GOE 464 airfoil.

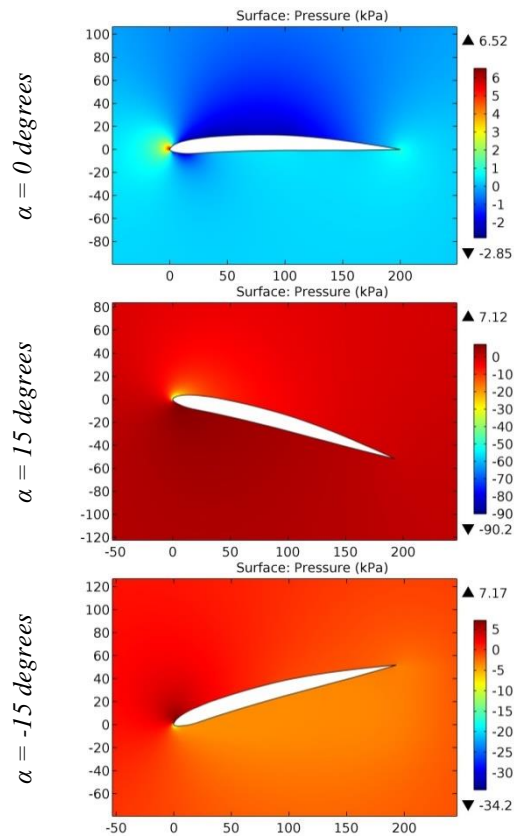


Figure 103. The pressure contours on the surfaces of the GOE 474 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

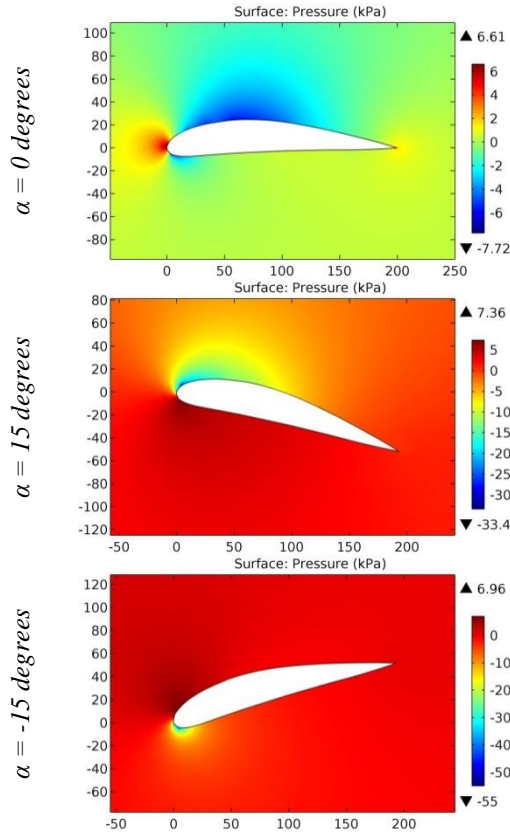


Figure 104. The pressure contours on the surfaces of the GOE 476 airfoil.

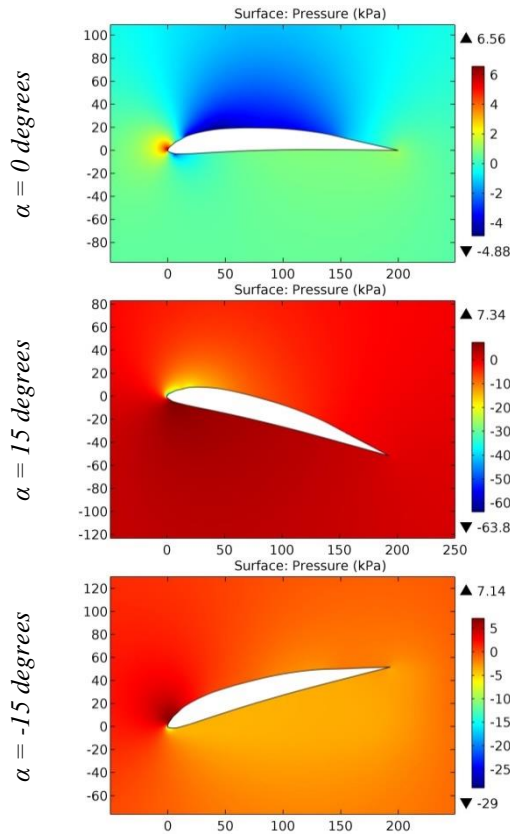


Figure 105. The pressure contours on the surfaces of the GOE 477 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

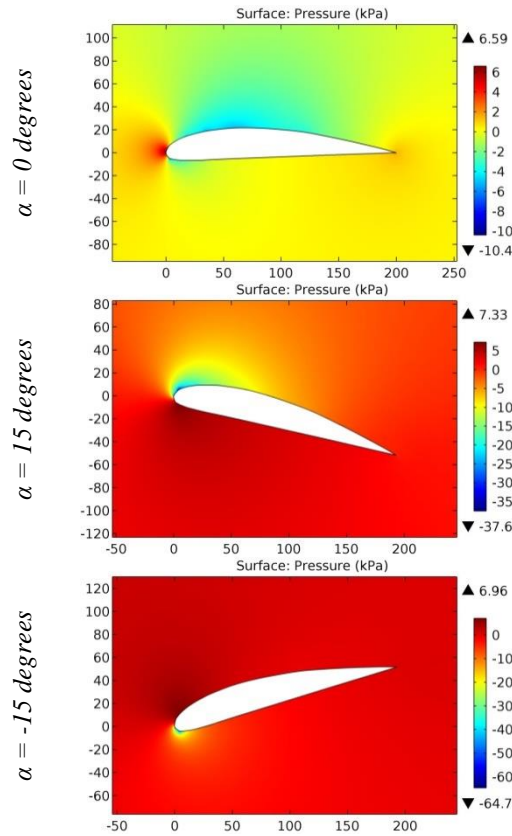


Figure 106. The pressure contours on the surfaces of the GOE 478 airfoil.

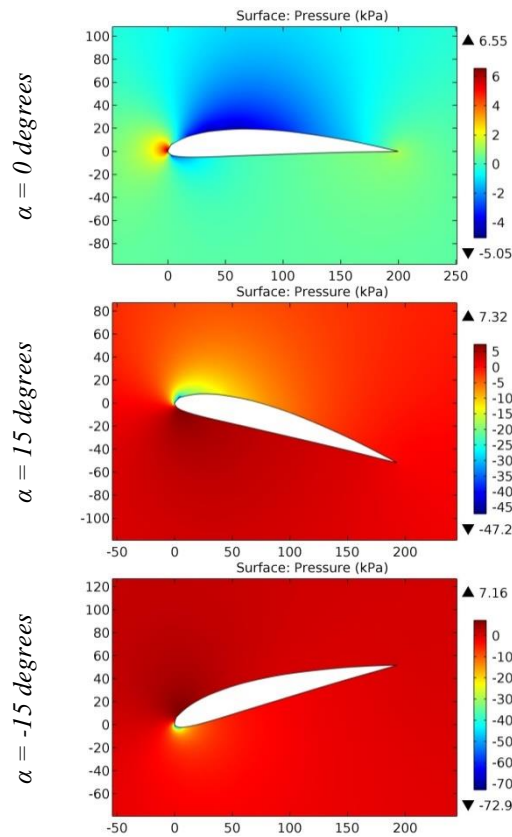


Figure 107. The pressure contours on the surfaces of the GOE 479 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

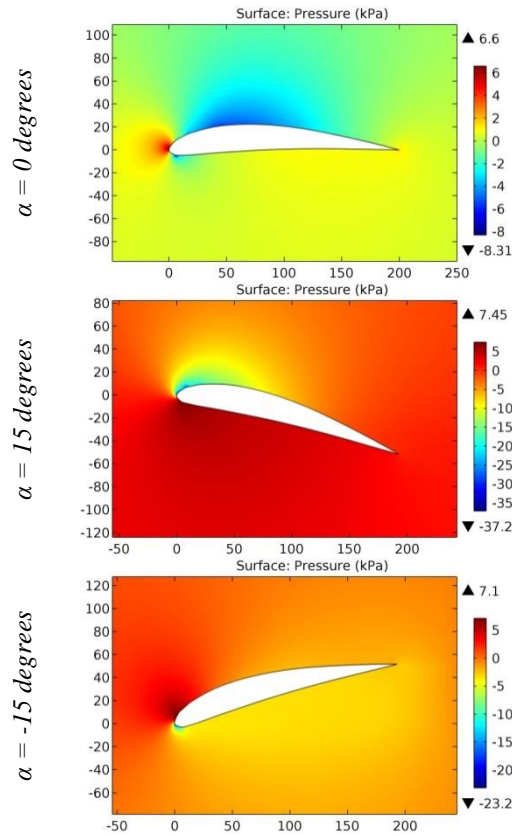


Figure 108. The pressure contours on the surfaces of the GOE 480 airfoil.

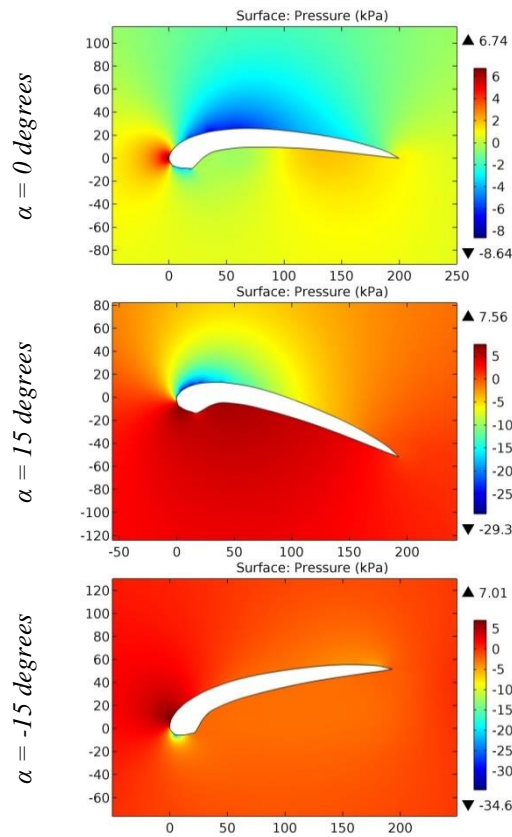


Figure 109. The pressure contours on the surfaces of the GOE 481 airfoil.

Impact Factor:

SISRA (India)	= 6.317	SIS (USA)	= 0.912	ICV (Poland)	= 6.630
ISI (Dubai, UAE)	= 1.582	ПИИЦ (Russia)	= 3.939	PIF (India)	= 1.940
GIF (Australia)	= 0.564	ESJI (KZ)	= 9.035	IBI (India)	= 4.260
JIF	= 1.500	SJIF (Morocco)	= 7.184	OAJI (USA)	= 0.350

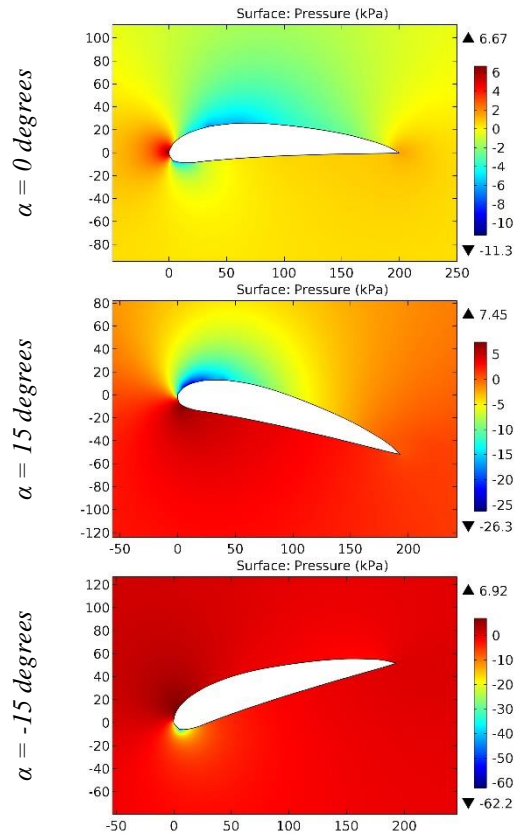


Figure 110. The pressure contours on the surfaces of the GOE 481A airfoil.

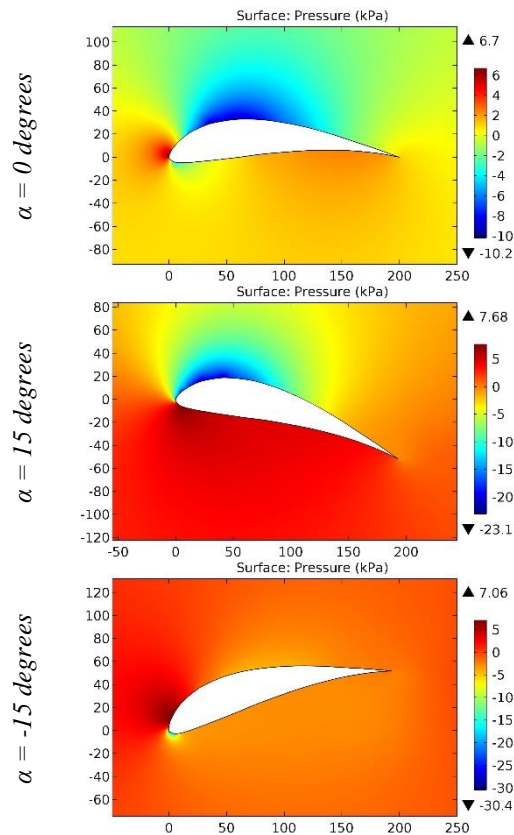


Figure 111. The pressure contours on the surfaces of the GOE 482 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

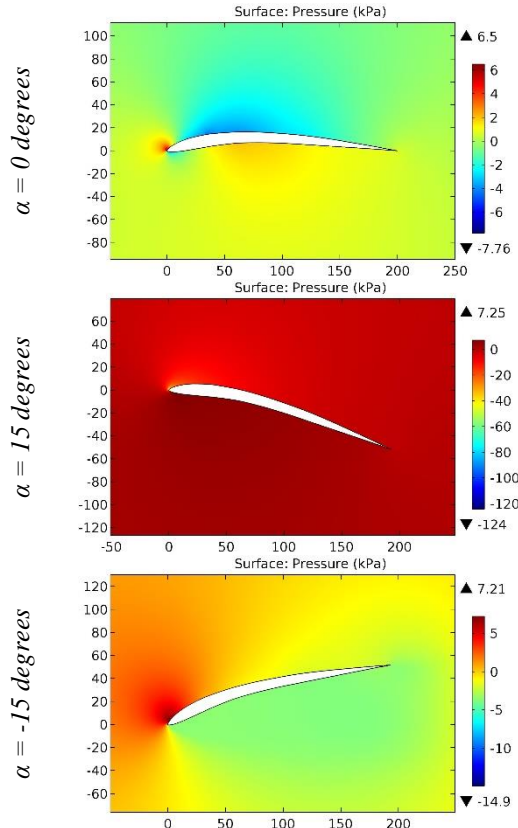


Figure 112. The pressure contours on the surfaces of the GOE 483 airfoil.

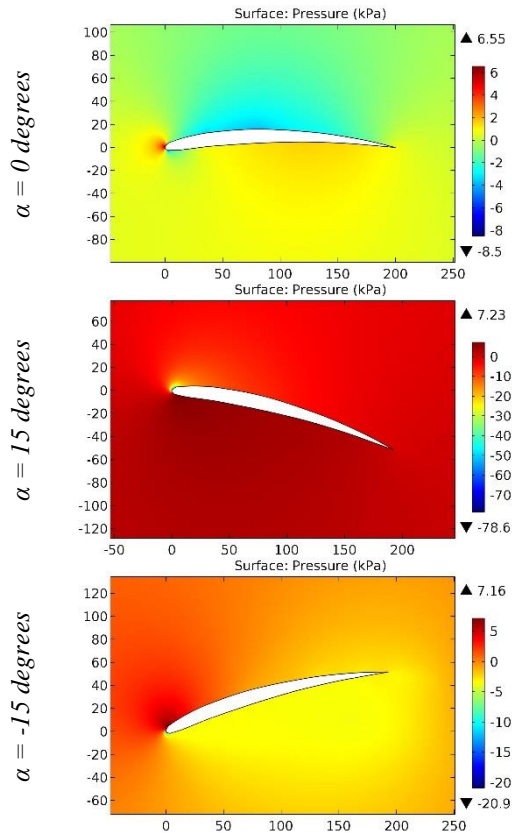


Figure 113. The pressure contours on the surfaces of the GOE 484 airfoil.

Impact Factor:

ISRA (India)	= 6.317	SIS (USA)	= 0.912	ICV (Poland)	= 6.630
ISI (Dubai, UAE)	= 1.582	ПИИЦ (Russia)	= 3.939	PIF (India)	= 1.940
GIF (Australia)	= 0.564	ESJI (KZ)	= 9.035	IBI (India)	= 4.260
JIF	= 1.500	SJIF (Morocco)	= 7.184	OAJI (USA)	= 0.350

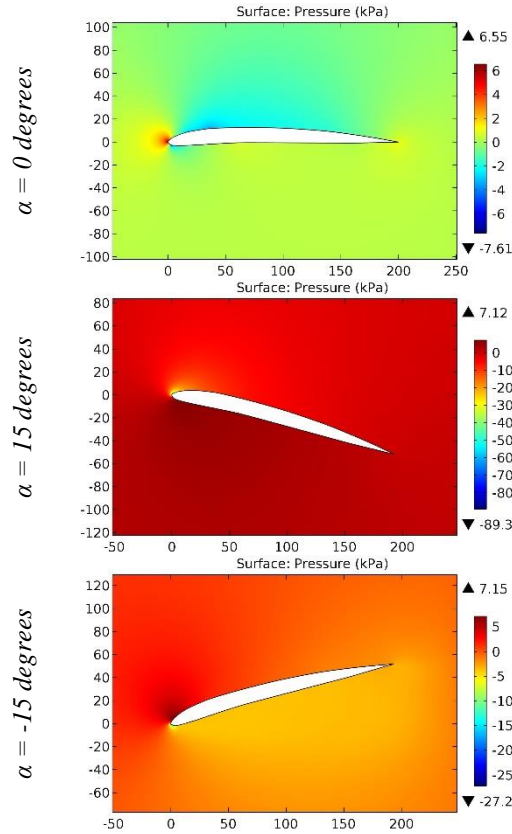


Figure 114. The pressure contours on the surfaces of the GOE 488 airfoil.

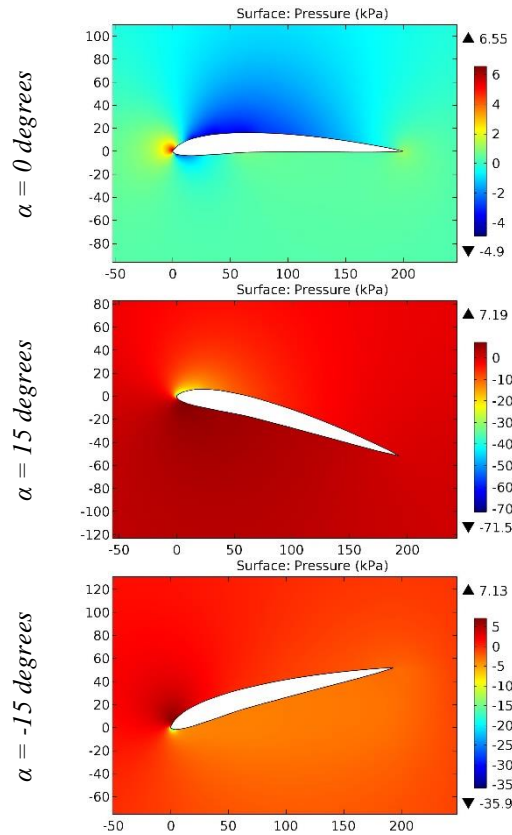


Figure 115. The pressure contours on the surfaces of the GOE 490 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

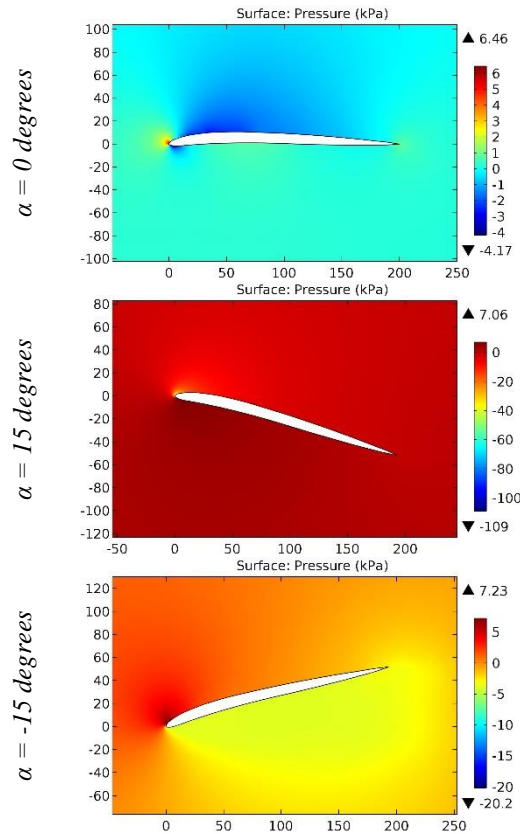


Figure 116. The pressure contours on the surfaces of the GOE 491 airfoil.

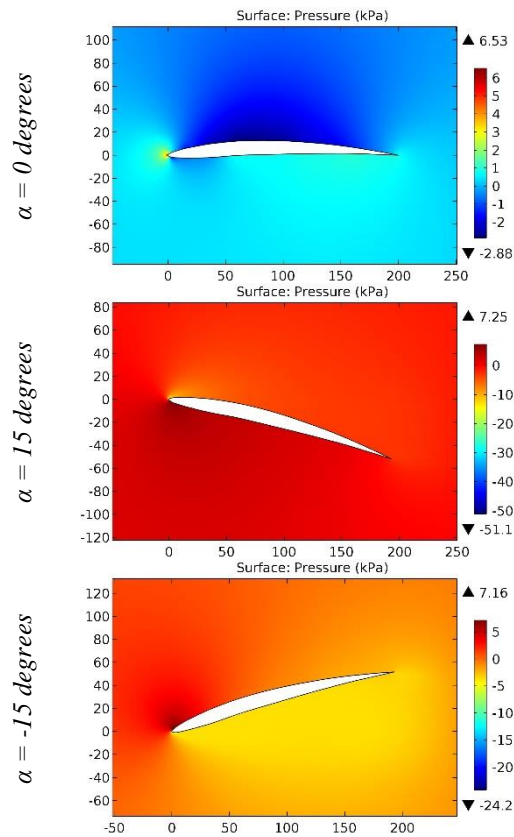


Figure 117. The pressure contours on the surfaces of the GOE 492 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

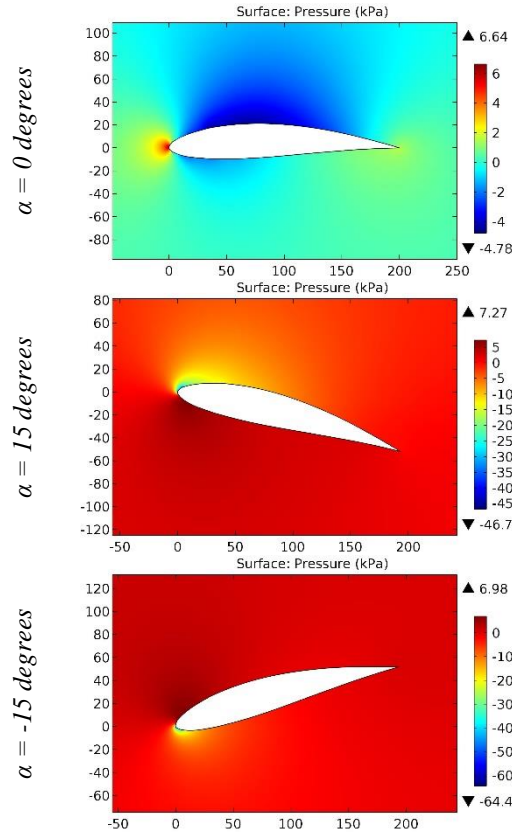


Figure 118. The pressure contours on the surfaces of the GOE 493 airfoil.

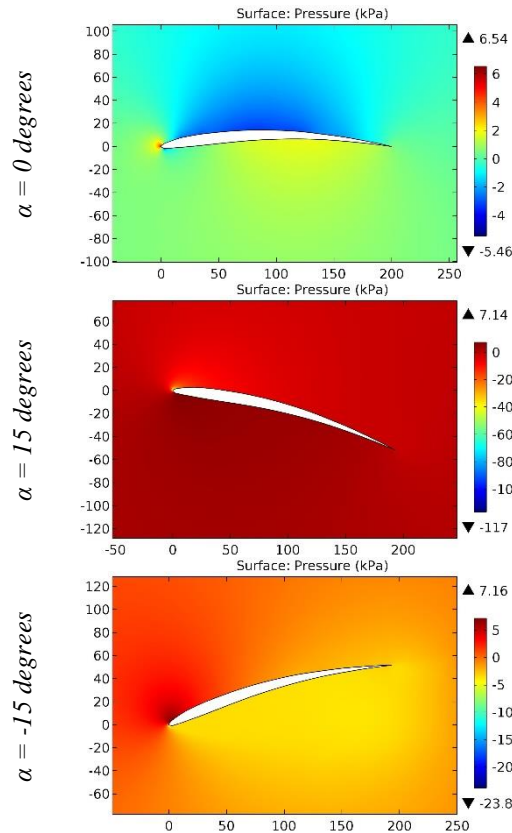


Figure 119. The pressure contours on the surfaces of the GOE 494 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

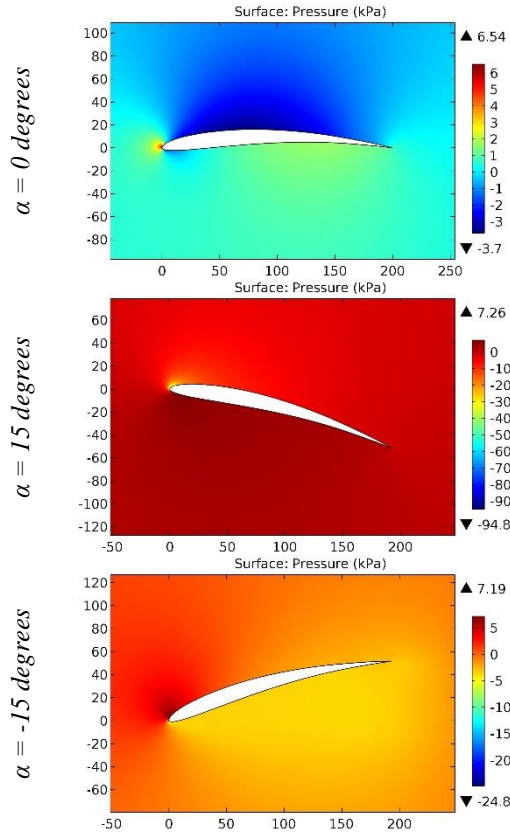


Figure 120. The pressure contours on the surfaces of the GOE 495 airfoil.

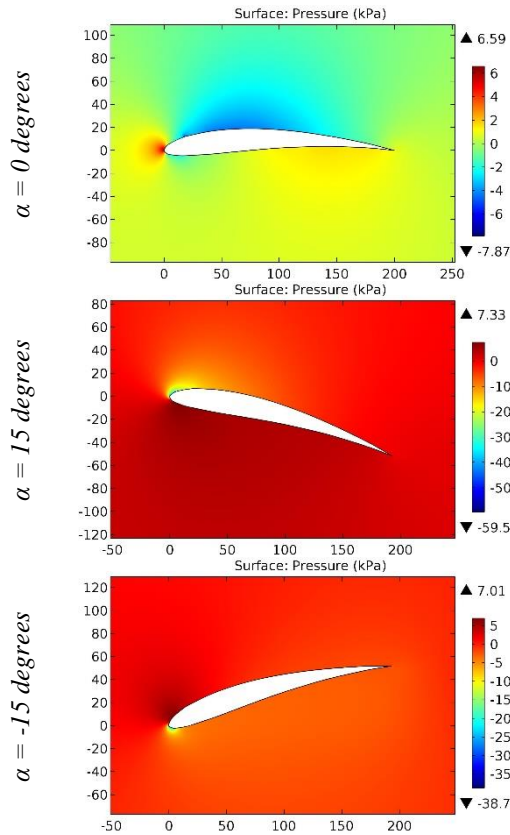


Figure 121. The pressure contours on the surfaces of the GOE 496 airfoil.

Impact Factor:

ISRA (India)	= 6.317	SIS (USA)	= 0.912	ICV (Poland)	= 6.630
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GIF (Australia)	= 0.564	ESJI (KZ)	= 9.035	IBI (India)	= 4.260
JIF	= 1.500	SJIF (Morocco)	= 7.184	OAJI (USA)	= 0.350

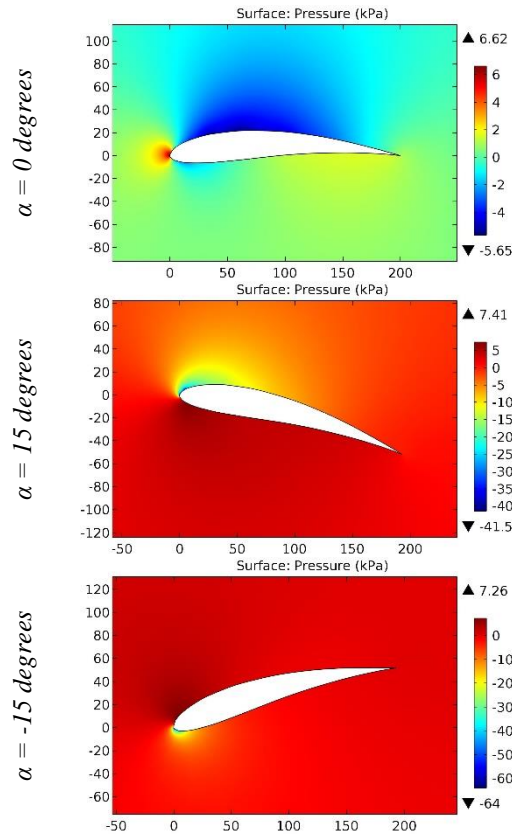


Figure 122. The pressure contours on the surfaces of the GOE 497 airfoil.

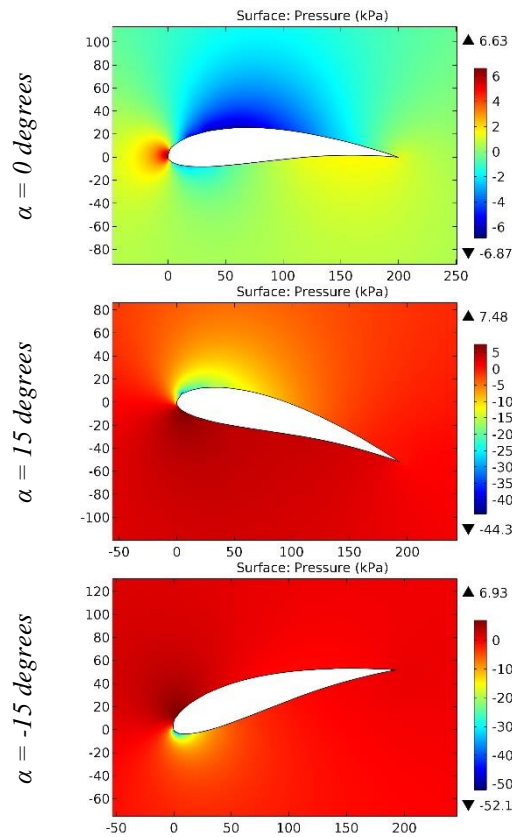


Figure 123. The pressure contours on the surfaces of the GOE 498 airfoil.

Impact Factor:

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GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

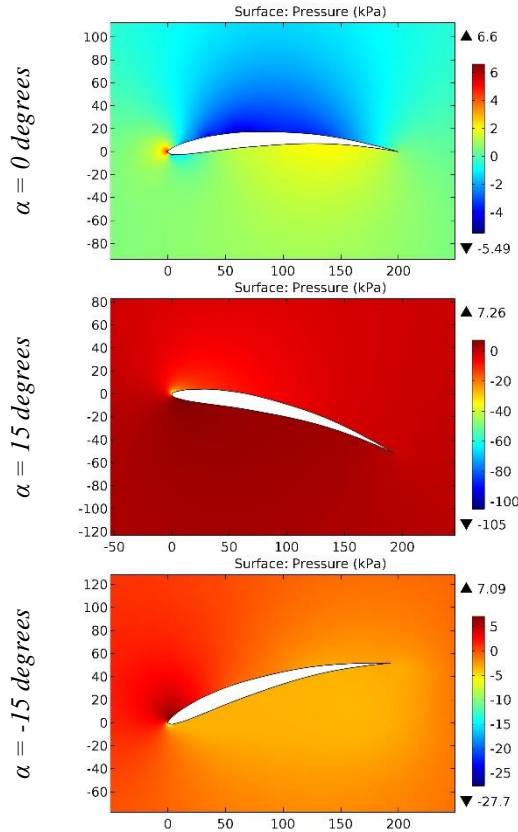


Figure 124. The pressure contours on the surfaces of the GOE 499 airfoil.

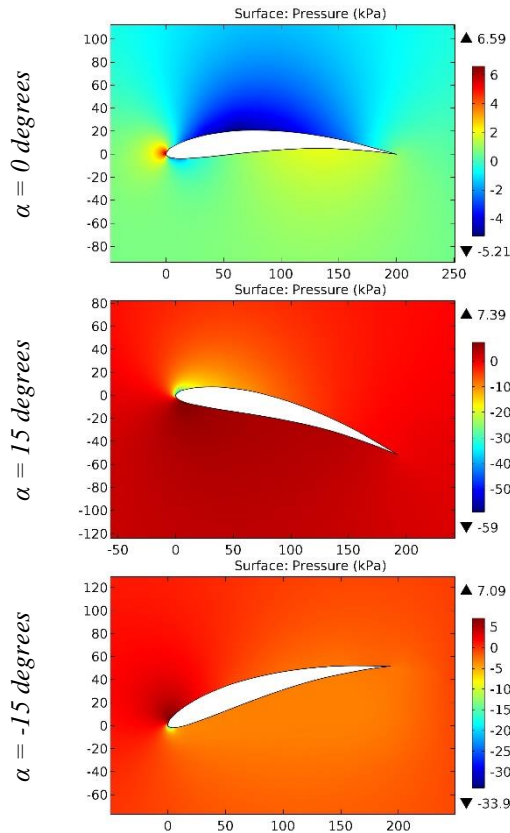


Figure 125. The pressure contours on the surfaces of the GOE 500 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
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GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

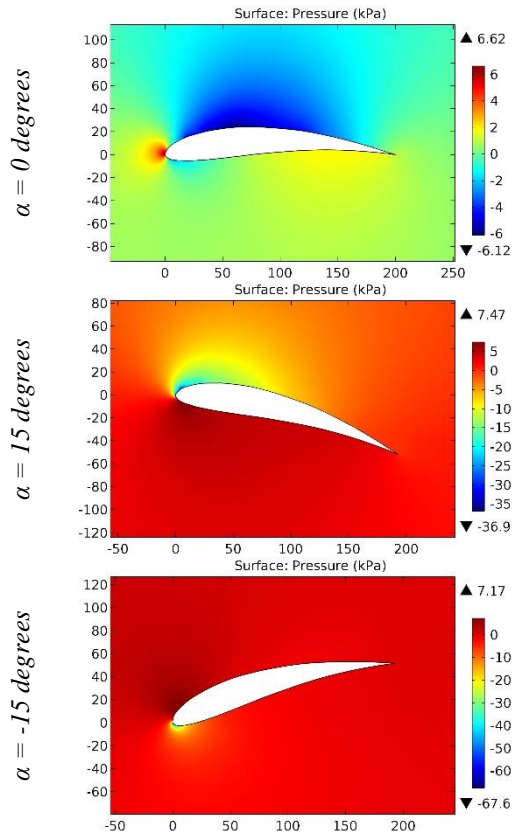


Figure 126. The pressure contours on the surfaces of the GOE 501 airfoil.

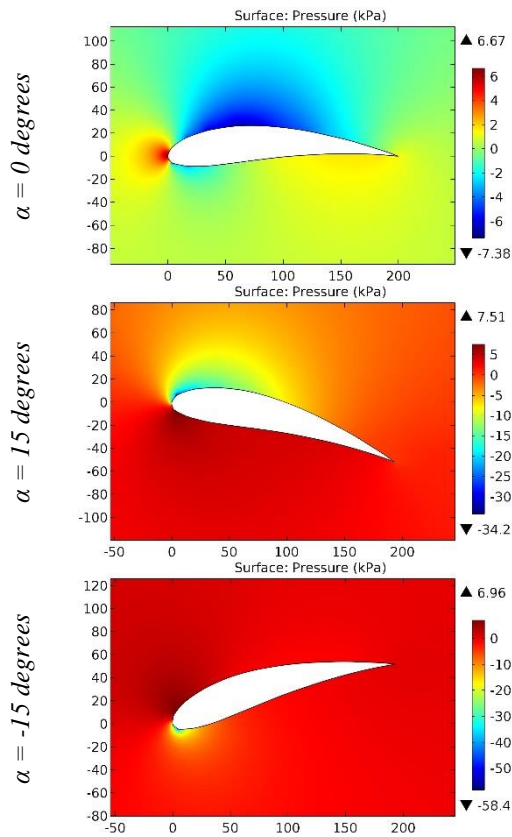


Figure 127. The pressure contours on the surfaces of the GOE 502 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
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GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

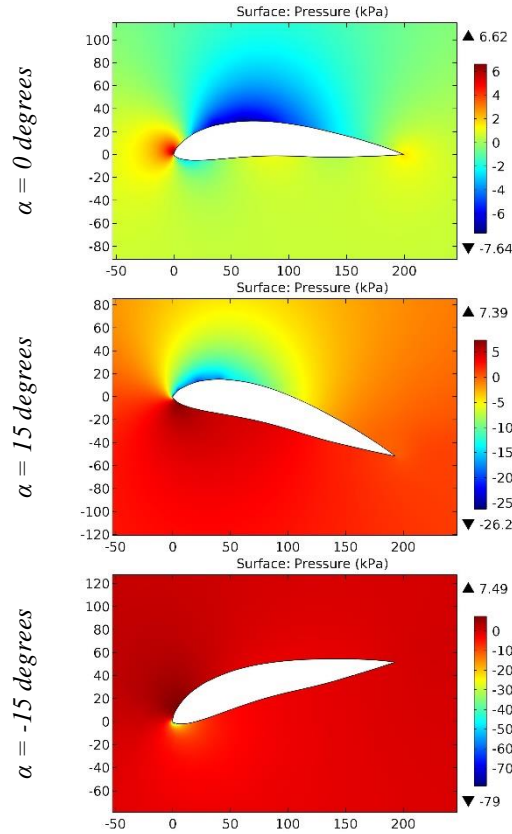


Figure 128. The pressure contours on the surfaces of the GOE 503 airfoil.

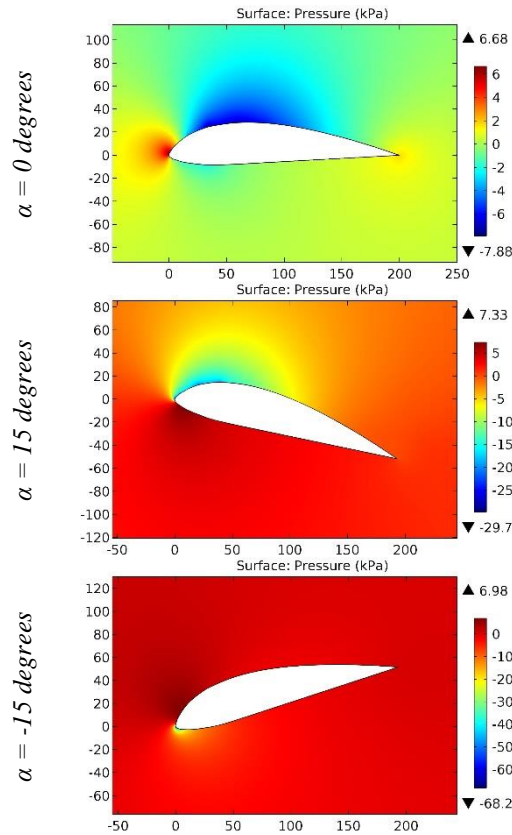


Figure 129. The pressure contours on the surfaces of the GOE 504 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
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GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

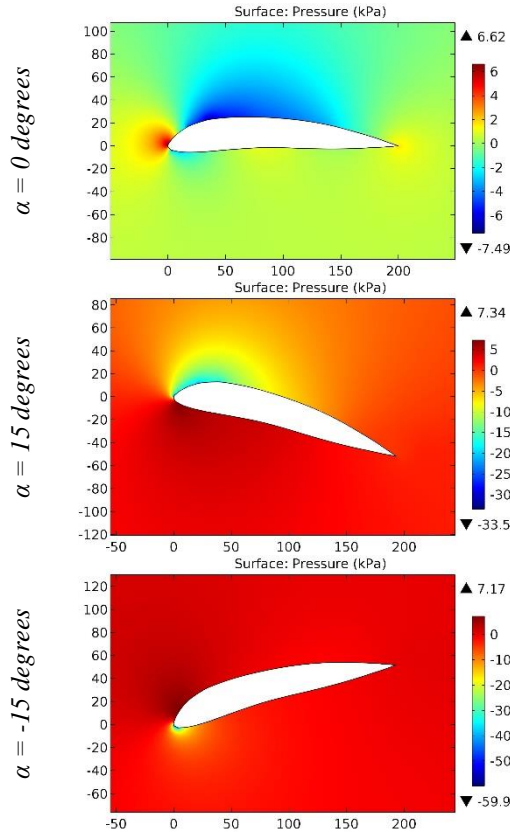


Figure 130. The pressure contours on the surfaces of the GOE 505 airfoil.

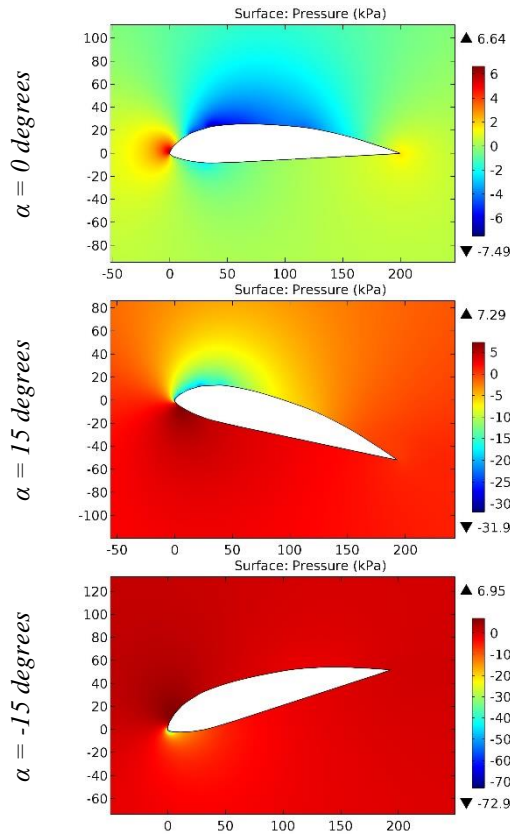


Figure 131. The pressure contours on the surfaces of the GOE 506 airfoil.

Impact Factor:

SISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
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GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

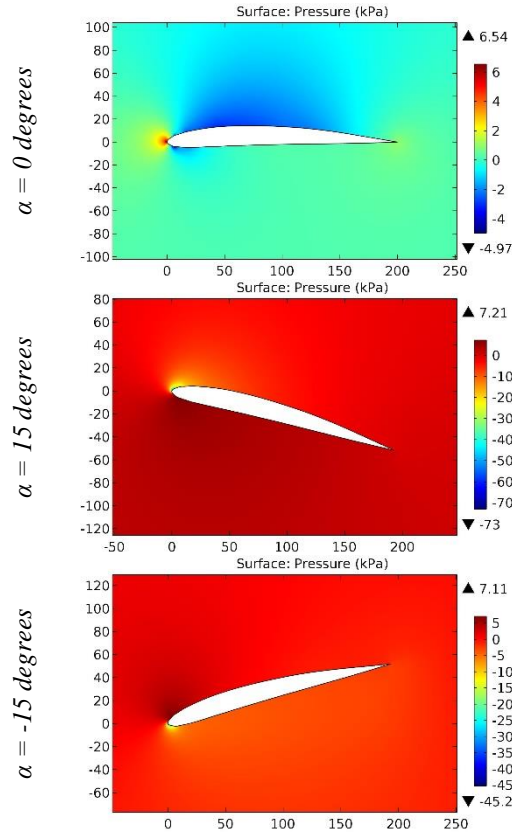


Figure 132. The pressure contours on the surfaces of the GOE 507 airfoil.

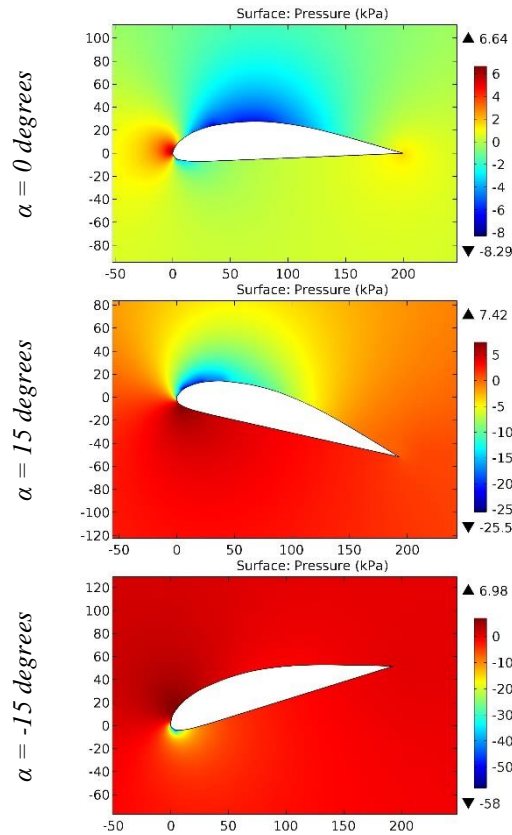


Figure 133. The pressure contours on the surfaces of the GOE 508 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
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GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

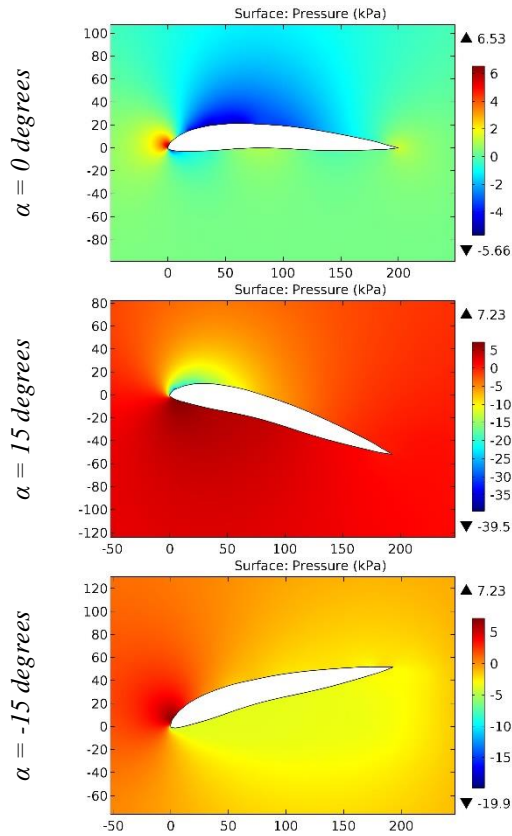


Figure 134. The pressure contours on the surfaces of the GOE 509 airfoil.

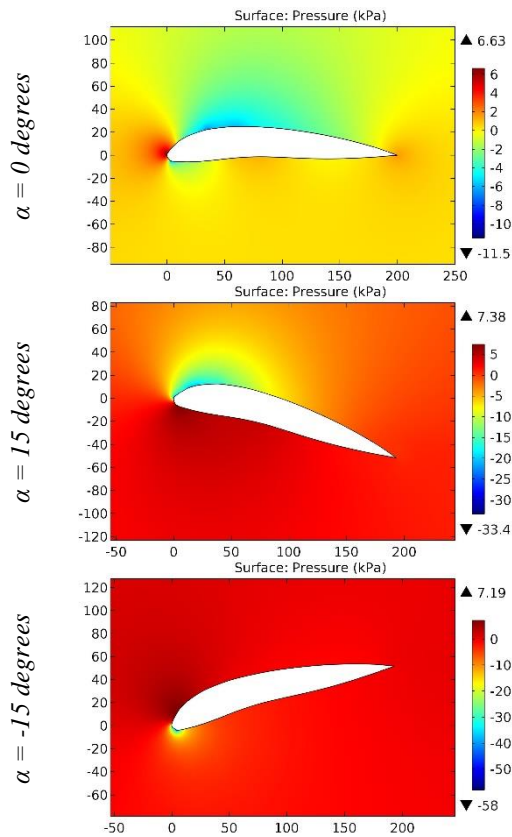


Figure 135. The pressure contours on the surfaces of the GOE 510 airfoil.

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ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
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GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

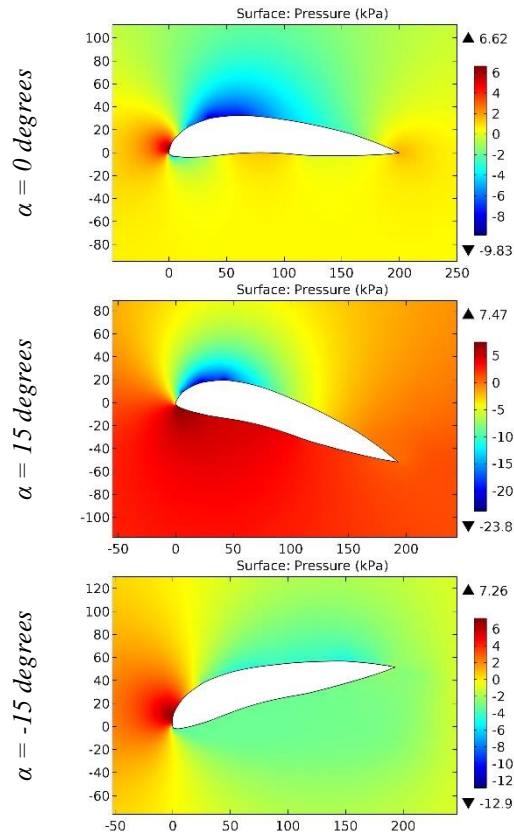


Figure 136. The pressure contours on the surfaces of the GOE 511 airfoil.

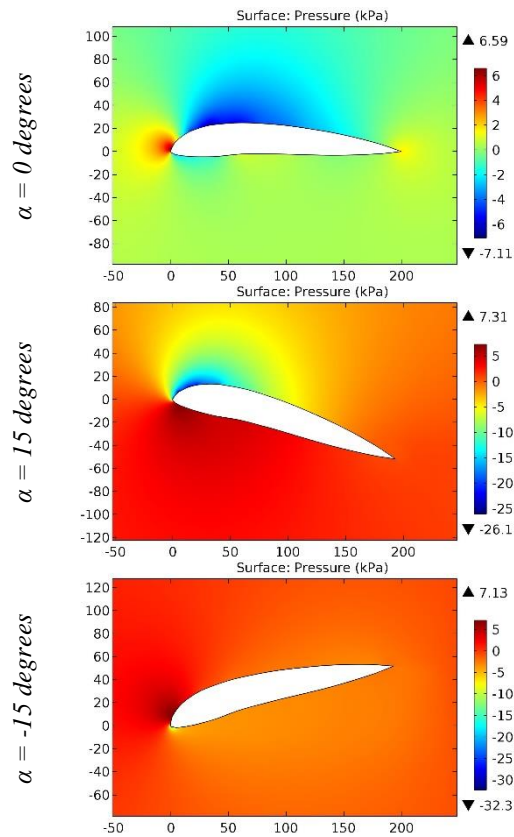


Figure 137. The pressure contours on the surfaces of the GOE 512 airfoil.

Impact Factor:

SISRA (India)	= 6.317	SIS (USA)	= 0.912	ICV (Poland)	= 6.630
ISI (Dubai, UAE)	= 1.582	ПИИЦ (Russia)	= 3.939	PIF (India)	= 1.940
GIF (Australia)	= 0.564	ESJI (KZ)	= 9.035	IBI (India)	= 4.260
JIF	= 1.500	SJIF (Morocco)	= 7.184	OAJI (USA)	= 0.350

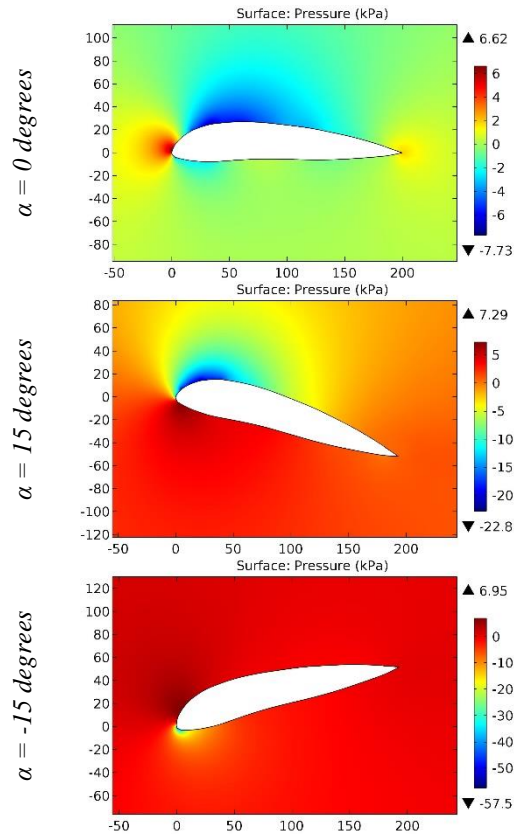


Figure 138. The pressure contours on the surfaces of the GOE 513 airfoil.

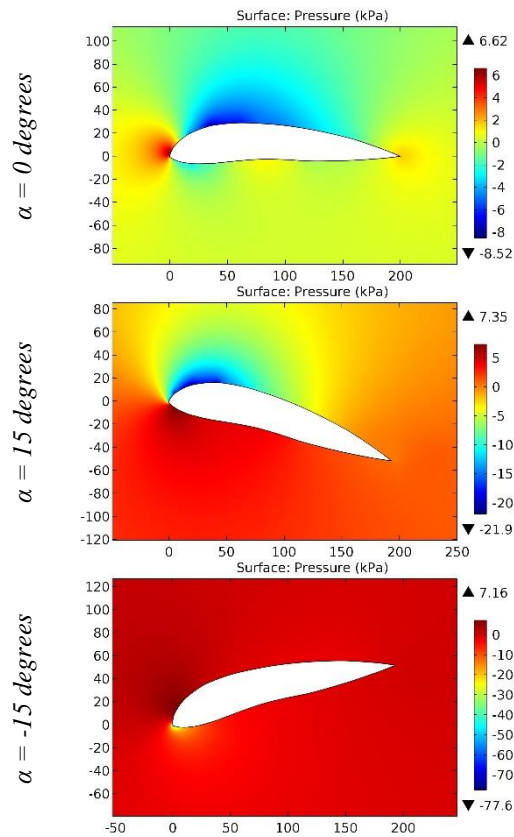


Figure 139. The pressure contours on the surfaces of the GOE 514 airfoil.

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GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

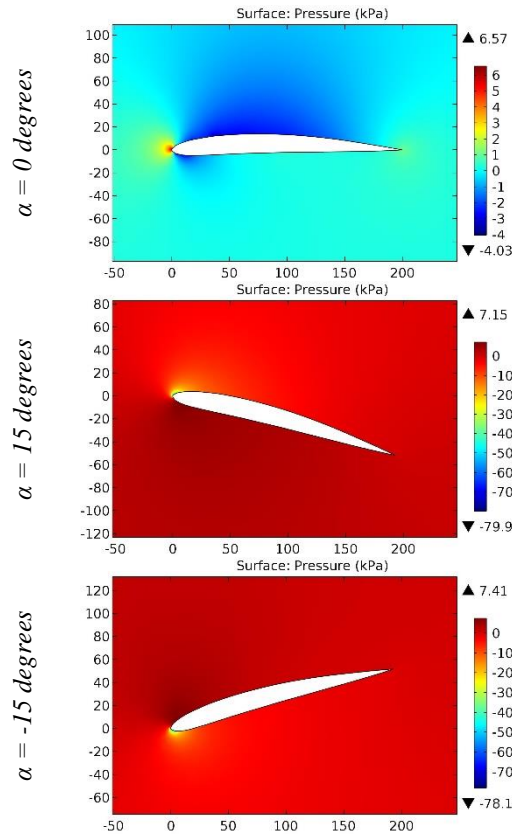


Figure 140. The pressure contours on the surfaces of the GOE 515 airfoil.

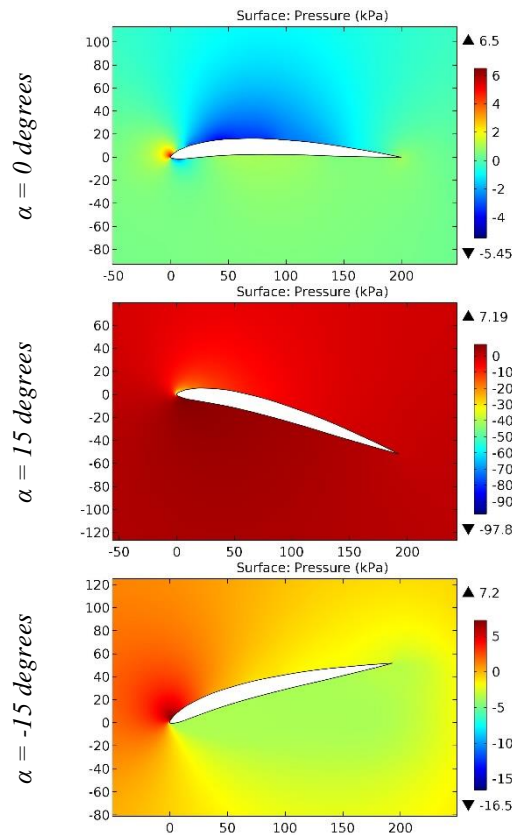


Figure 141. The pressure contours on the surfaces of the GOE 517 airfoil.

Impact Factor:

SISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
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GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

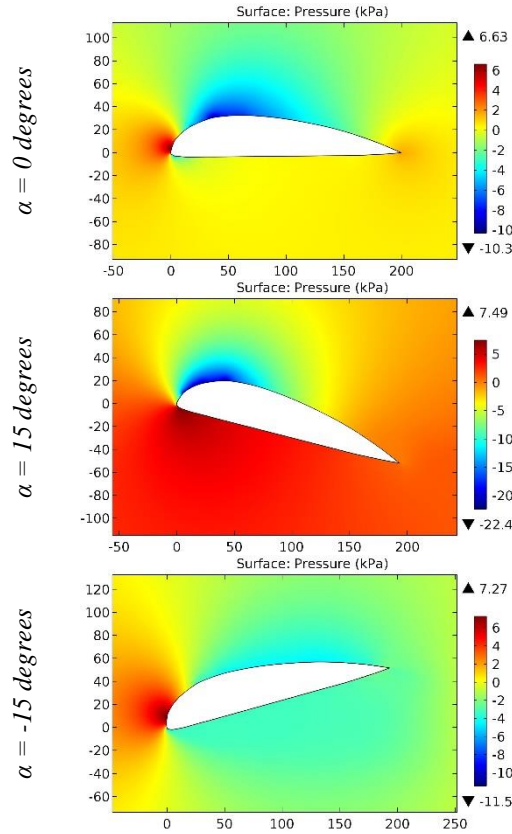


Figure 142. The pressure contours on the surfaces of the GOE 518 airfoil.

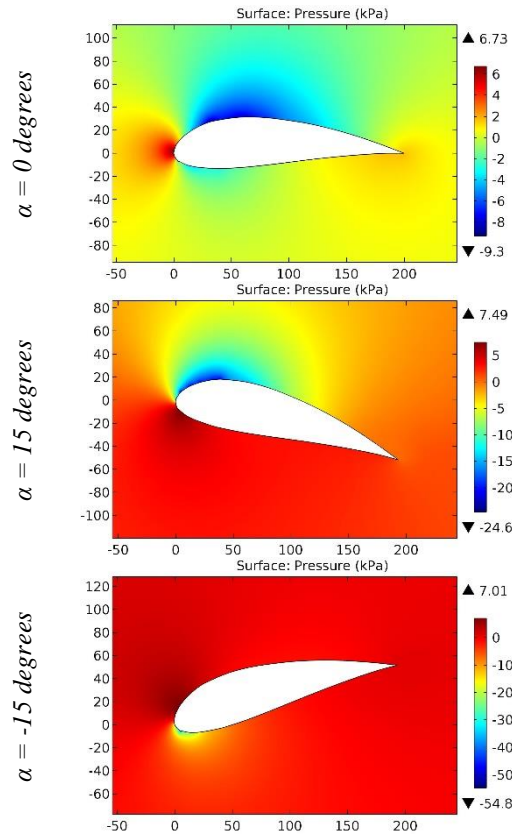


Figure 143. The pressure contours on the surfaces of the GOE 522 airfoil.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
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GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

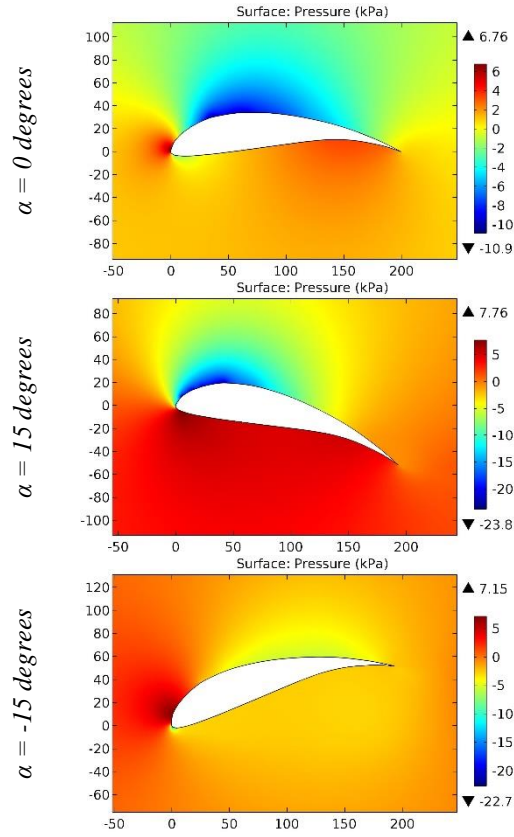


Figure 144. The pressure contours on the surfaces of the GOE 523 airfoil.

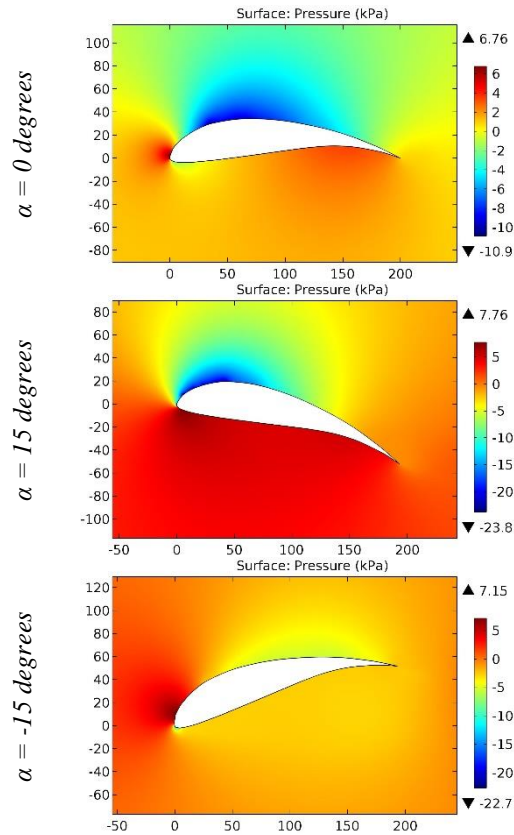


Figure 145. The pressure contours on the surfaces of the GOE 525 airfoil.

Impact Factor:

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GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

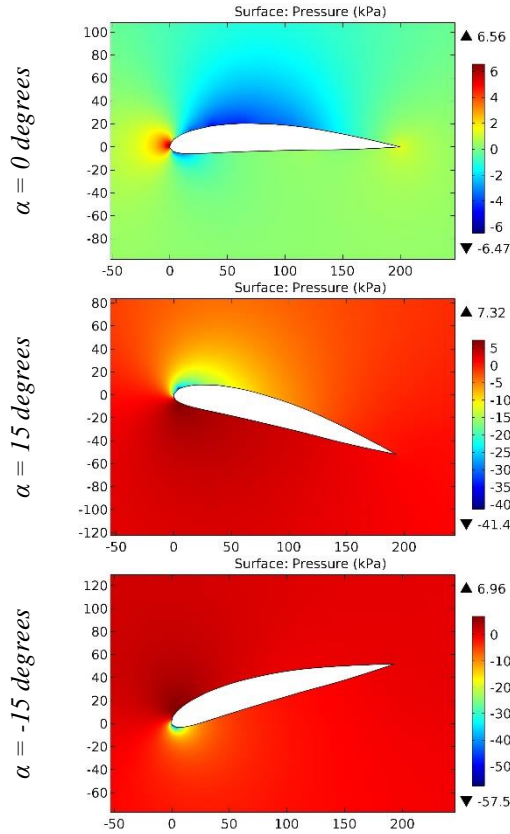


Figure 146. The pressure contours on the surfaces of the GOE 526 airfoil.

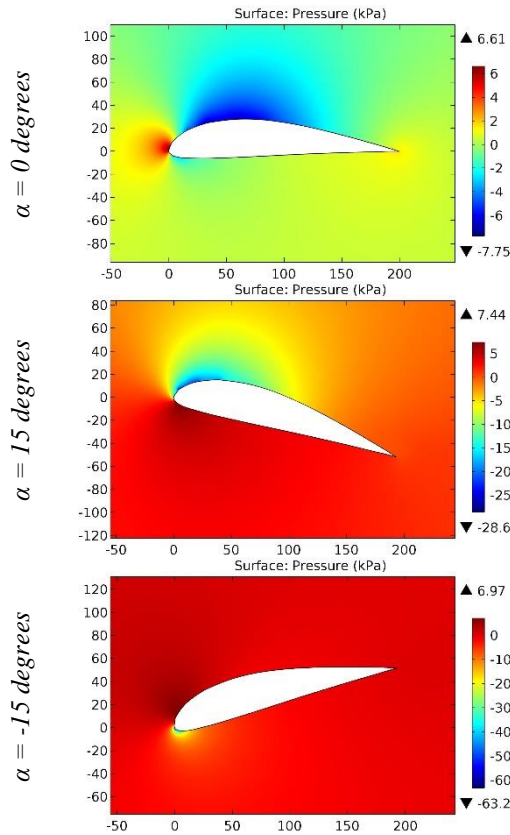


Figure 147. The pressure contours on the surfaces of the GOE 527 airfoil.

Impact Factor:

ISRA (India)	= 6.317	SIS (USA)	= 0.912	ICV (Poland)	= 6.630
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GIF (Australia)	= 0.564	ESJI (KZ)	= 9.035	IBI (India)	= 4.260
JIF	= 1.500	SJIF (Morocco)	= 7.184	OAJI (USA)	= 0.350

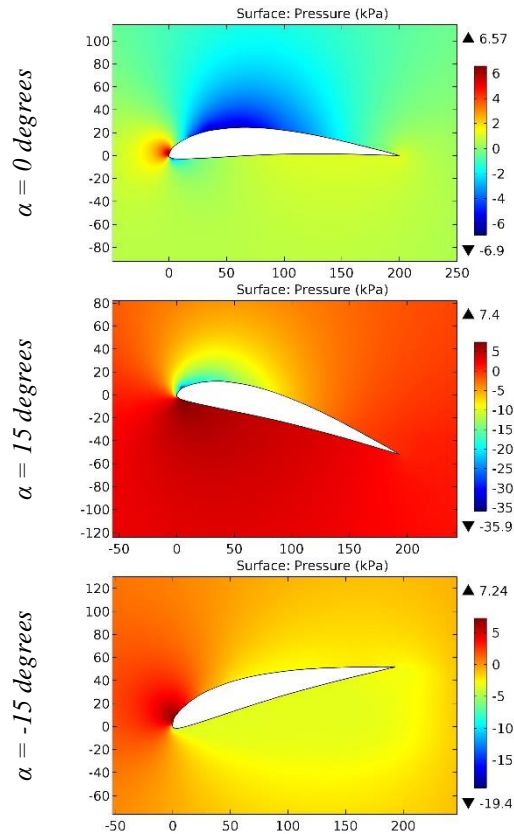


Figure 148. The pressure contours on the surfaces of the GOE 528 airfoil.

Conclusion

Based on the analysis of the computer simulation of the flight process of the airplane with the different airfoils of the wings of the GOE series, the following conclusions were made:

1. The good aerodynamic characteristics of the airplanes wings are determined by high lift and low drag. To create these airplane flight conditions, it is

preferable to choose the asymmetrical subsonic airfoils, in comparison with the symmetrical subsonic airfoils.

2. The processing of the numerical values of pressures at the leading edge of the supersonic airfoils makes it possible to assert that the drag value depends on the maximum thickness.

References:

1. Anderson, J. D. (2010). *Fundamentals of Aerodynamics*. McGraw-Hill, Fifth edition.
2. Shevell, R. S. (1989). *Fundamentals of Flight*. Prentice Hall, Second edition.
3. Houghton, E. L., & Carpenter, P. W. (2003). *Aerodynamics for Engineering Students*. Fifth edition, Elsevier.
4. Lan, E. C. T., & Roskam, J. (2003). *Airplane Aerodynamics and Performance*. DAR Corp.
5. Sadraey, M. (2009). *Aircraft Performance Analysis*. VDM Verlag Dr. Müller.
6. Anderson, J. D. (1999). *Aircraft Performance and Design*. McGraw-Hill.
7. Roskam, J. (2007). *Airplane Flight Dynamics and Automatic Flight Control*, Part I. DAR Corp.
8. Etkin, B., & Reid, L. D. (1996). *Dynamics of Flight, Stability and Control*. Third Edition, Wiley.
9. Stevens, B. L., & Lewis, F. L. (2003). *Aircraft Control and Simulation*. Second Edition, Wiley.
10. Chemezov, D., et al. (2021). Pressure distribution on the surfaces of the NACA 0012 airfoil under conditions of changing the angle of attack. *ISJ Theoretical & Applied Science, 09 (101)*, 601-606.
11. Chemezov, D., et al. (2021). Stressed state of surfaces of the NACA 0012 airfoil at high angles

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SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

- of attack. *ISJ Theoretical & Applied Science*, 10 (102), 601-604.
12. Chemezov, D., et al. (2021). Reference data of pressure distribution on the surfaces of airfoils having the names beginning with the letter A (the first part). *ISJ Theoretical & Applied Science*, 10 (102), 943-958.
 13. Chemezov, D., et al. (2021). Reference data of pressure distribution on the surfaces of airfoils having the names beginning with the letter A (the second part). *ISJ Theoretical & Applied Science*, 11 (103), 656-675.
 14. Chemezov, D., et al. (2021). Reference data of pressure distribution on the surfaces of airfoils having the names beginning with the letter B. *ISJ Theoretical & Applied Science*, 11 (103), 1001-1076.
 15. Chemezov, D., et al. (2021). Reference data of pressure distribution on the surfaces of airfoils having the names beginning with the letter C. *ISJ Theoretical & Applied Science*, 12 (104), 814-844.
 16. Chemezov, D., et al. (2021). Reference data of pressure distribution on the surfaces of airfoils having the names beginning with the letter D. *ISJ Theoretical & Applied Science*, 12 (104), 1244-1274.
 17. Chemezov, D., et al. (2022). Reference data of pressure distribution on the surfaces of airfoils (hydrofoils) having the names beginning with the letter E (the first part). *ISJ Theoretical & Applied Science*, 01 (105), 501-569.
 18. Chemezov, D., et al. (2022). Reference data of pressure distribution on the surfaces of airfoils (hydrofoils) having the names beginning with the letter E (the second part). *ISJ Theoretical & Applied Science*, 01 (105), 601-671.
 19. Chemezov, D., et al. (2022). Reference data of pressure distribution on the surfaces of airfoils having the names beginning with the letter F. *ISJ Theoretical & Applied Science*, 02 (106), 101-135.

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Jamshid Sharafetdinovich Tukhtabaev

Tashkent State University of Economics
PhD., Associate Professor,
Department of Economic security (Uzbekistan)
jamshidtukhtabaev@gmail.com

Munira Djuraevna Xolikova

Tashkent State University of Economics
Master

Aziza Abdusalomovna Goziyeva

Termez State University
Master

Rushana Rashidovna Mamarayimova

Tashkent State University of Economics
Master

Shakhnoza Togaevna Buronova

Tashkent State University of Economics
Master

THE SYSTEM OF STATE REGULATION AND SUPPORT OF AGRICULTURAL EXPORTS

Abstract: This article describes the system of export, regulation and support of agricultural products in our country. Scientific and practical proposals have been developed to increase the export potential of agricultural products.

Key words: agriculture, exports, imports, agrarian reforms, export geography, government guarantees, export insurance, tax incentives, soft loans.

Language: English

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Introduction

Expansion of exports of agricultural and industrial products and services is one of the most important priorities of economic development of the Republic of Uzbekistan in the future.

Today, the volume of exports in Uzbekistan is growing rapidly due to the removal of various existing tariffs and non-tariff barriers.

Major barriers, such as financing and lending to foreign trade operations that our national exporters

often face, as well as insurance against political and other risks associated with the production of export products, expansion of exports and sales on world markets, have been removed.

Further increase in the country's export potential, development of new markets and increase in budget revenues are closely linked to the creation of favorable conditions for fruit and vegetable exporters.

In this regard, large-scale work is being carried out in Uzbekistan to introduce modern market

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PIF (India) = 1.940
IBI (India) = 4.260
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mechanisms, increase its volume by simplifying the export procedure, and develop the logistics system.

According to the data, fruits and vegetables are the second largest export commodity in the country after gas. This is evidenced by the fact that today 180 types of fruits and vegetables are supplied to 80 countries of the world.

It should be noted that the Decree of the President of the Republic of Uzbekistan dated October 17, 2018 "On additional measures to increase the efficiency of export of fruits and vegetables" significantly simplified the mechanism of export of fruits and vegetables.

In particular:

- now legal entities can export it without a down payment, without opening a letter of credit, without a bank guarantee and without an insurance policy against political and commercial risks;

- organizations that do not provide timely receipts from exports are included in the register of dishonest exporters of fruits and vegetables. They are subject to 100% prepayment requirements for export;

- enterprises have the right to export fruits and vegetables without a wholesale license. Recall that it is planned to be canceled completely. Individual entrepreneurs will have to pay a single tax on the proceeds from the export of fruits and vegetables;

- exported fruits and vegetables are not subject to customs inspection, except in cases where there is a risk of violation of customs legislation. In this case, the exporter is responsible for the reliability of the information contained in the documents, as well as for the illegal movement of goods across the customs border.

In addition, 1 electronic application system was introduced instead of 6 types of paper documents from entrepreneurs, and contracts were transferred to 100% online bidding.

The processing time for permits has been reduced from 10 days to 1 day for exports and from 30 days to 3 days for imports.

A QR code system has been introduced in all permissive documents.

Certification documents have been transferred to an electronic system, and PayMe and the Central Bank's Munis payment system have been launched.

Exports of plants and plant products in January-November 2021: 2 mln. 514 thousand tons (an increase of 113 % compared to 2020).

All agronomic inspectors were attached to 4,275 exporting packaging enterprises, 6,364 orchards and vineyards, 1,444 greenhouses and 4,275 farms growing other agricultural products.

In order to create the necessary conditions for the effective implementation of export and pre-export financing, export credit and risk insurance mechanisms, in accordance with the Resolution of the President of the Republic of Uzbekistan dated 24.05.2019 № RP-4337:

- to cover interest expenses on pre-export loans of commercial banks, including loans to replenish working capital, on loans in national currency - in excess of the refinancing rate of the Central Bank of the Republic of Uzbekistan, but not more than 10% In the amount of non-p, for loans in foreign currency - compensation in the amount of 40% of the rate set by commercial banks, but not more than 4%;

- guarantees for loans from commercial banks, including pre-export loans, up to 50% of the loan amount, but not more than 4 billion soums;

- establish a mechanism to provide subsidies to local exporters (their authorized representatives) to reimburse up to 50% of transportation costs by road, rail and air;

- legal entities whose share of exports of finished products at the end of the reporting period in the total proceeds from the sale of goods (works, services), including through the commissioner (trustee) at the end of the reporting period is more than 50% A number of benefits and privileges aimed at export development were provided, such as the introduction of a procedure for deferring the payment of value added tax on imports of raw materials, components and materials used in the production of goods for 120 days from the date of adoption of the customs declaration.

Decree of the President of the Republic of Uzbekistan № DP-5177 of September 4, 2021 "On priority measures for the liberalization of foreign exchange policy" and the Decree of the President of the Republic of Uzbekistan dated September 4, 2021 Resolution DP-3253 "On priority measures to support" measures to improve foreign exchange policy and foreign trade, attract foreign investment in the economy, increase export potential, has become one of the fundamental steps in the sustainable development of modern, export-oriented industries and small business and private entrepreneurship.

In accordance with this Decree and Resolution:

- the requirement for all exporters, regardless of the form of ownership, to sell their foreign currency earnings has been abolished;

- individuals were allowed to freely sell and buy foreign currency through commercial banks and to dispose of the purchased funds without any restrictions.

In accordance with the Resolution of the President of the Republic of Uzbekistan dated January 14, 2021 "On measures to implement the export potential of the Republic of Uzbekistan in 2021" №. RP-4949, the Export Promotion Fund 50% of foreign expenses related to the opening and maintenance of trading houses of local exporters, lease of office, commercial and warehouse premises, as well as the establishment of advertising companies, fruit and vegetables and assisting exporters of industrial products in providing factors of production and engineering and communication infrastructure,

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coordinating the activities of local exporters to find foreign partners and ensure the signing of export contracts and other measures of diplomatic support increase exports and practical measures have been taken to encourage exporters.

Effective organization of foreign economic activity will have a positive impact on increasing competition in all sectors of the economy, as well as strengthen the country's position in the world market. The main strategy of our country's foreign economic activity is to develop import-substituting production, develop export-oriented production and strengthen its competitiveness in the world market. In turn, these processes are in many respects related to the integration of the Republic of Uzbekistan into the world economy, its comparative advantage in terms of regional and global competitiveness, the development and implementation of foreign economic policy. Despite the heated debate on the ongoing structural reforms, it is important to take into account the effectiveness of the country's geographical, industrial and technological, labor resources in the development of foreign economic policy. Because the strengthening of the international division of labor requires a high level of competitiveness from the participants in international financial relations.

In accordance with the Decree of the President of the Republic of Uzbekistan dated October 21, 2020 "On measures to further expand financial support for export activities", a number of preferential procedures aimed at financial support to exporters to increase the country's export potential was introduced. In particular, to compensate for interest expenses on loans in national and foreign currencies, regardless of the interest rate and loan amount established by a commercial bank for loans for working capital, and provide guarantees for loans in this area. This plays an important role in expanding financial opportunities to increase export potential.

In the implementation of effective measures aimed at increasing the export potential of the country, further strengthening the financial support of exporting enterprises, the President of the Republic of Uzbekistan on July 13, 2021 "On further strengthening the financial support of export activities". The adoption of the resolution was important. According to him, in order to further expand the opportunities for financial support to exporters, the Export Support Fund will be allocated \$

100 million for a period of 5 years at a rate of 1%. This has created favorable conditions for increasing the efficiency of export operations in our country by providing financial support and preferential financial resources.

Also, in accordance with the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated October 4, 2021 "On approval of the Regulation on the procedure for reimbursement of part of transportation costs for export" RCM-618, exporting business entities (their authorized the procedure for reimbursement of up to 50% of transportation costs for the export of goods by road, rail, air and mail, through subsidies from the State Budget of the Republic of Uzbekistan by the Export Promotion Agency under the Ministry of Investment and Foreign Trade marked.

It should be noted that the set of foreign economic activity of our country and its integration into the world economy includes clearly defined goals and key measures to achieve them. First of all, it is necessary to identify the sectors that make up the strong export link of the national economy and ensure its worthy place in the world market, as well as the widespread use of methods of state support of the economy in the field of exports.

In this process, the main strategic goals of developing foreign economic activity and increasing the export potential of the country are to ensure the integration of the national economy into the global economic system, attracting foreign capital to implement projects aimed at producing high-capacity products. Conditions created in free economic zones for increasing the export potential, meeting the needs of the national economy in imported products as much as possible through the implementation of projects for the production of import-substituting products, production of export-oriented products and attracting foreign capital and extensive use of opportunities and further development of the infrastructure of foreign economic activity.

In conclusion, it should be noted that additional measures to stimulate exporting enterprises in the national economy and expand the export of competitive products, attract foreign direct investment and strengthen integration into the world economy - measures will become an important factor in achieving sustainable economic growth.

References:

1. (n.d.). *Law of the Republic of Uzbekistan. About the Central Bank of the Republic of Uzbekistan*

National Database of Legislation: No. 03/19/582/4014. 12.11.2019.

Impact Factor:	ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
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	JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

- Tukhtabaev, J.Sh. (2021). Assessment of indicators of investment activity from the point of view of strengthening economic security. *ISJ Theoretical & Applied Science*, № 07 (99), pp. 143-148.
- (n.d.). *Official site of the Central Bank of the Republic of Uzbekistan*. Retrieved from www.cbu.uz
- Tillaeva, B.R., Tukhtabaev, J.Sh., & Ismagulova, G.N. (2020). Labour protection problems in ensuring the economic security of industrial enterprises. *Asian Journal of Technology & Management Research*, 2020.
- (n.d.). Retrieved from www.global-rates.com/interest-rates
- Tukhtabaev, J.Sh. (2021). Econometrical Assessment of Factors Affecting Diversification of Production in Farms Ensuring Food Security. *International Journal of Modern Agriculture*, 2021.
- Tukhtabaev, J.Sh. (2016). The theoretical approach on increase of professional skill of workers and stimulation of their creativity. *ISJ Theoretical & Applied Science*, 2016.

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Ravil Yagsupovich Mazitov

Osh State Law Institute
PhD in Law, Associate Professor of
the Department of Civil Law and Procedure
Kyrgyz Republic, Osh

Niyazbek Adylzhanovich Pazylov

Osh State Law Institute
PhD in Law, Associate Professor of
the Department of Civil Law and Procedure
Kyrgyz Republic, Osh

Gulzat Satybaldieva Omorova

Osh State Law Institute
Senior Lecturer, Department of Civil Law and Process
Kyrgyz Republic, Osh

ENVIRONMENTAL AND LEGAL EDUCATION AS A NEED FOR THE DEVELOPMENT OF MODERN SOCIETY

Abstract: The article highlights the problems of the need to introduce and improve the level of environmental education in modern higher education. The ecological situation is currently forcing humanity to rethink its relationship to nature. Rethinking as a process is closely related to the level of environmental education. It is noted that the main source of education in this area are the universities of the republic, which will play a decisive role in this process. It is said about the need to improve the level of teaching on the relationship of human society with the natural environment.

Key words: ecology, ecological education, ecological education, ecological culture, ecological thinking, social ecology, natural environment, rethinking.

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Introduction

The interaction of society and nature is currently a general scientific problem. In recent decades, its ecological aspect has become a global, complex, acute social phenomenon that determines the fate of mankind as a whole. Disharmony in the relationship of mankind with the environment, the violation of the natural balance due to spontaneous human activity and its transformation into the main socio-natural force inevitably lead to a global environmental crisis [1].

Modern economic and other human activities have an increasing negative impact on the nature

around us, human life and health. Problems that only recently seemed to be something very far away are now beginning to affect us as well. Until recently, nature protection in the Kyrgyz Republic was the area of activity of a narrow circle of individual authorized persons and organizations, and ecology initially had nothing to do with the protection of the natural environment. Now the word "ecology" is familiar to everyone. Ecology is devoted to scientific works and research, problems are covered in the press and on television. Such interest in the last 25-30 years to

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environmental issues cannot but rejoice. But there is another side, namely, what caused this interest.

An increase in the rate of production growth, the need to meet the needs of the world population, the struggle for more comfortable conditions of existence determine the primacy of economic values in the life of society [2]. The emphasis is on the unlimited use of natural resources, but few think about the consequences of such exploitation. The growth of the world's population, which in some regions caused a population explosion, for example, China, the states of Africa, South Asia. The population explosion has the consequence that huge territories are being taken from nature for housing and public institutions, highways and railways, airport terminals and marinas, crops and pastures. Forests were cut down in dozens of square kilometers. Pastures perished under the hooves of numerous herds. In parallel with the population explosion, there was also a scientific and technological revolution. The use of nuclear energy, launches of rocket technology, computerization, the introduction of synthetic materials into human life. These reasons have led to a colossal consumption of natural resources. Industrial wastes pollute the environment more and more, destroying the health of the population. Over the past decades, cancer, chronic pulmonary and cardiovascular diseases have become widespread [3].

The problems of ecology at the present time can conditionally be divided into local, regional and global in scale and require different means and different scientific developments for their solution.

To solve such problems, scientific research is already needed. The first is the development of effective methods for the absorption of smoke and gas aerosols, based on the latest scientific and technical achievements, the second is accurate hydrological studies, the third is to determine the impact on the health of the population of prolonged exposure to low doses of radiation and the development of soil decontamination methods, the fourth is the creation of a legal framework .

Despite the changes in nature that occur through the fault of man, the idea of transforming nature has not been stopped. There is no need to talk about improving the practice of nature management in our region.

In order to eliminate the contradictions between the development of human society and the conservation of nature in a short time frame, a balance must be found. This is feasible under the condition that managerial decisions are made, with the obligatory consideration of environmental problems. The implementation of these decisions must be strictly enforced in practice.

The main feature of the modern period of interaction between man and nature is the qualitative growth of the influence of anthropogenic factors on the environment, leading to the depletion of natural

resources and negative changes in the biosphere. The last decades of the 20th century convincingly showed both the danger of the current situation and the need for a qualitative change in the scientific, theoretical, legal, organizational and other foundations for making and implementing decisions that affect the state of the natural environment” [4].

In this regard, in the science of environmental law, a proposal is reasonably made about the need for legal regulation of the preparation and adoption of such decisions, incl. taking into account the concept of sustainable development. Thus, ensuring environmental requirements in the preparation and adoption of economic and other decisions and their implementation at the time of economic and other environmentally significant activities are considered by scientists as the main tasks in the formation of environmental legislation based on the concept of sustainable development. At the same time, the creation of the foundations for environmental and legal support for its implementation should be interconnected with the mechanism for preparing and making environmentally significant decisions [5].

In terms of in the wake of the ecological crisis, the problem of finding new approaches to this issue in education is paramount. The term environmental education was coined at a conference organized by the International Union for the Conservation of Nature (1970). In the future, many conferences, summits, etc. paid attention to environmental education. The UN Conference held in Rio de Janeiro (1992) defined the tasks and goals of environmental education. From which it is clear how many problems have matured in this direction. The education system that exists in many countries has a narrow specialization, which in turn is one of the reasons for the crisis of this system [7]. Another reason for the crisis in education is the strict distinction between the humanities and the natural sciences and technical disciplines. The result of such education is deformation, distortion of assessments of reality.

In modern conditions, education should be more holistic. Education should, among other things, perform a preventive function, preparing people for crisis phenomena. This requires the unity of humanitarian and natural science education.

In the system of modern legal education, there is a need for new special courses, moreover, for the opening of new faculties that could train specialists in the field of ecology and law. Those special courses that are currently being held in the universities of the republic on environmental issues do not meet the requirements, the curricula for them are outdated and do not reflect reality.

The higher school should work out the ways of development, the standards of environmental education, which should include: issues of environmental protection, rational use of natural resources, environmental legislation [8]. University

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graduates should be able to apply this knowledge in practice. This applies not only to lawyers, but also to graduates of all specialties and directions. These goals are achieved through lectures, seminars, conferences, trainings, as well as research work of students in the field of ecology. Environmental education itself should be not only educational in nature, but also include upbringing, training, enlightenment.

Environmental education is the most important tool for ensuring environmental protection, rational use of natural resources, directly dependent on the level of awareness of all population groups in the field of ecology. Ecological education consists in the formation of the ecological culture of the individual and society as a set of spiritual experience of human interaction with nature, it is a continuous process of self-education that forms special knowledge on nature protection. An important element of environmental education is environmental education - a process that is aimed at the formation of a humane, moral, careful attitude to nature. Ecological education and upbringing should be given great public importance [9].

The question of the survival of mankind depends on the state of ecological education and culture: whether a person will be able to develop the mechanisms of "bio-sphere compatibility" or whether he will face extinction as a biological species. Only through environmental education and upbringing, revision of the achievements of civilization and legislation will society be able to counteract a total environmental catastrophe.

In December 2002, at the 57th session of the UN General Assembly, it was proclaimed that the decade

starting from 2005 was declared the decade of education for sustainable development.

The central issues that were identified as priorities were environmental protection, natural resource management, waste management, biological and landscape diversity, health care, cultural diversity, and changing the structure of production and consumption. The development of a strategy for the large-scale implementation of environmental issues in the education process has a further goal of reorienting education towards sustainable development, raising public awareness and professionalism [10].

Environmental education is one of the most important social substructures of society. Its content, development and functioning reflect the state of society, the features of its transition from the industrial to the information society of the 21st century. Under these conditions, the strengthening of ties between education and culture through the ecologization of mass consciousness acquires special significance.

Environmental education allows you to objectively consider the relationship between environmental, social and economic problems, taking into account public opinion, the involvement of non-governmental organizations in the decision-making process related to environmental issues. This is not only an important factor in the implementation of the sustainable development strategy, but also the basis of an effective environmental policy.

One of the directions of ecologization of public consciousness is the development of social educational programs.

References:

1. Tyurina, T. A. (2018). Ecological and technical picture of the world as an imperative for the sustainable development of modern civilization. *Bulletin of the Belarusian State University. Philosophy*, No. 3. Philosophy. Philosophy, pp. 10-18. www.cyberleninka.ru
2. Khrapov, S. A. (2009). Anthropological factor in the formation of the consumer orientation of the public consciousness of modern Russia. *Bulletin of the Volgograd state. university*, Ser. 7. Philosophy, No. 1(9), pp. 52-57.
3. Yashin, A.D. (n.d.). *Scientific and legal problems of nature protection and ecology*. [Electronic resource]. Retrieved from www.ecolife.ru
4. Sosunova, I.A., Rybalsky, N.G., & Samotesov, E.D. (n.d.). *Methodology and methods of public participation in the preparation and adoption of environmentally significant decisions*. (p.5). Moscow: NIA-Priroda, REFIA.
5. Taloverov, S.Yu. (2009). Improvement of the ecological and legal mechanism in the conditions of modern Russia. *Legal world*, No. 4, pp. 56-59.
6. Smaleva, P.G. (n.d.). *The role of environmental education in the implementation of the concept of sustainable development at the global and regional levels (on the example of the Tomsk region)* [Electronic resource]. Retrieved from www.cyberleninka.ru
7. Verbitsky, A.A. (1997). Basic principles of the concept of continuous environmental education. *Education: problems and prospects*, №2 (7), pp. 4-5.

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	JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

8. Vypkhanova, G.V. (2007). *Environmental education and sustainable development*. Problems of improving the methods of teaching environmental-legal and agricultural-legal academic disciplines in legal universities in Russia. Materials of the All-Russian Pouchpo-Me'khtsological Seminar. (pp.261-266). Moscow: Taglimat.
9. Gadzhilov, G.M. (2003). *The role of the formation of ecological culture of youth in the prevention of crimes against wildlife // Problems of juvenile delinquency in the Republic of Dagestan*. Collection of scientific papers. (pp.75-80). Makhachkala: Publishing House Dag. un-ta.
10. Golichenkov, A.K. (1999). Textbooks and teaching aids on environmental law: historical review and perspectives. *Bulletin of Moscow University*, No. 4, pp.55-60.

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
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Gulzat Satybaldievna Omorova

Osh State Law Institute
Senior Lecturer, Department of Civil Law and Process
Kyrgyz Republic, Osh

Niyazbek Adylzhanovich Pazylov

Osh State Law Institute
PhD in Law, Associate Professor of
the Department of Civil Law and Procedure
Kyrgyz Republic, Osh

Ravil Yagsupovich Mazitov

Osh State Law Institute
PhD in Law, Associate Professor of
the Department of Civil Law and Procedure
Kyrgyz Republic, Osh

CURRENT ISSUES OF CONCLUDING CIVIL LAW CONTRACTS IN THE FIELD OF LABOR LAW

Abstract: The author considers the peculiarities and problematic aspects of the recognition of the civil-law contract by the employment contract, and also identifies the criteria that differentiate these contracts and allow the re-qualification of the civil-law contract in the employment contract.

Key words: employee, employer, civil contract, employment contract, Labor Code, court.

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Introduction

The dominant fundamental definition of an employment contract is given in the Labor Code in Art. 53, where it begins with the word “agreement”, which is concluded between the main subjects of the employment contract, these are the “employer” and “employee”, indicating the employer’s obligation to provide the employee with work according to the stipulated labor function, to ensure all working conditions provided for by labor law and local acts of the organization, and pay wages on time. And the employee, in turn, undertakes to personally perform the entire labor function stipulated by the agreement and adhere in strict accordance with the rules existing in this organization [1].

So, on the basis of Article 6 of the Labor Code [1], when it is established in court that a civil law contract actually regulates labor relations between an employer and an employee, the provisions of labor legislation apply to such relations. For example, in practice there are cases when new employees are hired, then such contracts are concluded with them, which are similar in their elements to civil law contracts and on the basis of these, labor relations are established. As for civil law, for example, under contracts for the provision of services or performance of work, the performer (contractor) is obliged to fulfill a specific task (tasks) of the customer, which is known even at the time of the conclusion of the contract (Articles 623, 697 of the Civil Code of the Kyrgyz Republic). According to the basics of a labor

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agreement, a person hired must fulfill his obligation on the subject of the contract and in accordance with the job description, following the instructions of the employer (Article 53 of the Labor Code of the Kyrgyz Republic). It should be noted that the main feature is the process of labor activity of the employee, and how it will be implemented.

The practical justification of these provisions in this circumstance may lead to a violation of the rights of citizens (workers) to work, since they cannot acquire full legal status to be called "workers", and not a performer or contractor. At the same time, one loses hope for those guarantees that are provided for in Article 42 of the Constitution of the Kyrgyz Republic and the Labor Code of the Kyrgyz Republic [2]. Perhaps to eliminate these contradictions and legal consequences, the legislator in Art. 6 of the Labor Code of the Kyrgyz Republic provides for the possibility of transforming a civil law contract into an employment contract, or as a result of this procedure, labor law norms will be applied to relations recognized as labor. It should be noted that, despite its legislative consolidation or the possibility of recognizing such contracts as employment contracts, there are unresolved problems in the implementation of this procedure.

Russian scientists [3, p.142] pay attention to the following features:

- personal performance by the employee of his labor function (work in a certain position according to the state, in a certain profession, specialty and the implementation of all instructions of the management as they become available);
- the obligation to comply with the internal labor regulations and other local regulatory legal acts, provided that the employer creates the necessary conditions for their implementation;
- lack of definition of the concluded contract;
- fixed salary;
- extension to the person of the guarantees provided for by the labor law;
- responsibility of employees.

This distinction in practice can be replaced by civil law contracts on the basis of bypassing a number of guarantees both in legal and economic terms.

In this regard, the change of civil law contracts into labor contracts can be divided into two categories:

a) When the contractor (employee) and the customer (employer) trust each other and knowingly enter into a civil law contract, fully aware of the legal consequences of such an action. That is, the will of the parties is aimed at the emergence of civil law relations. In these cases, the plaintiffs are primarily the tax authorities, who have to prove that the employment contract was replaced by a civil law contract, which they do not always succeed.

b) When the customer (employer), when concluding a civil law contract, is not sure that the employee will suddenly decide to reclassify this

contract into an employment contract. At the same time, both the performer (employee) and the tax authorities can present requirements for legalization. In addition, in these cases, the risk of retraining civil into labor increases significantly [4].

There is a growing number of cases in judicial practice when employers make unlawful attempts to disguise labor relations and replace them with civil law relations. Employers justify their preference for concluding such contracts by the fact that such contracts give them an alternative when terminating the contract without obligations, while the real employee actually does not receive any prescribed guarantees and compensation upon termination of the employment contract. As a result, it turns out that a civil law contract at its price for an "incompetent" employer can be considered almost "free".

In the legal literature, there are supporters of those who assume the identity of an employment contract and civil law, and the current norms of civil law in labor [5], as well as ways to change an employment contract into a contract of employment under civil law. Such identity, in our opinion, is debatable.

When concluding a civil law contract, the employer, in fact, can be released from financial, social and economic obligations to the employee and, to the same extent, to the state. Under an employment contract, the rights and obligations of the parties to an employment contract are much wider than those of the subjects of a civil law contract [6, p. 104].

The more employers of employing citizens expand the scope of civil law contracts, in practice it can lead to worse consequences and the emergence of many questions about recognizing the concluded labor contract [8].

In civil circulation, civil law contracts are, to put it mildly, in great demand, which makes it practically in demand. But in practice, when applying an employment contract, taking into account market conditions for business entities, the conclusion of contracts of this kind is very difficult, due to the burden and the emergence of additional obligations to a citizen (employee). Therefore, in our opinion, it will be "more convenient" for all economic entities to settle existing relations for them to conclude civil law contracts rather than labor contracts [9].

There is a downside to this approach when "unscrupulous" employers, entering into civil law contracts with elements of an employment contract that the contractor (employee) can prove in the event of a dispute or identified by law enforcement agencies during an investigation, may be punished.

We also note that the courts, when deciding whether to classify a contract as labor or civil law, they can check the acts that could be issued by the employer, social payments, the subject of the contract and other documents received by the citizen during the

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period of labor or other activities associated with the employer [10].

Summing up, it should be said that the problem we are considering attributing or identifying a civil law contract with a labor contract is currently imperfect, because it does not have significant features. According to Yu.P. Orlovsky, exploring this problem, proposes "to establish clear signs of labor

relations, the existence of which is incompatible with the conclusion of civil law contracts" [7]. On this basis, in our opinion, it would be correct to accurately indicate all these signs that would be enshrined in the current labor code in order to minimize further contradictions and prevent violations of the rights of citizens participating in such public relations.

References:

1. (2004). Labor Code of the Kyrgyz Republic of Bishkek dated August 4, 2004 No. 106 (as of November 29, 2021 No. 142). www.toktom.kg
2. (2021). *The Constitution of the Kyrgyz Republic Adopted by referendum (popular vote) on April 11, 2021* (Enacted by the Law of the Kyrgyz Republic on May 5, 2021). <http://toktom.kg>
3. Zaboey, K.I. (2003). *Legal and philosophical aspects of a civil law contract*. (p.33). St. Petersburg. Legal Center.
4. Korolkov, A. E. (1983). *Practical problems of differentiation between labor and civil law relations*. <https://www.top-personal.ru/lawissue.html>
5. Soifer, V.G. (2005). Labor and civil legislation in the regulation of labor relations. *Legislation and economics*, No. 9.
6. Timonina, I. V. (2014). Difference between an employment contract and civil law contracts. *Bulletin of the Moscow University. S. Yu. Witte. Series 2: Legal Sciences*, No. 2(5), pp. 102-105. <https://www.muiiv.ru/vestnik/yn/chitatelnyam/poisk-po-statyam/8050/42102>
7. (2015). *Commentary on the Labor Code of the Russian Federation* (item-by-article) / Ed. Yu.P.Orlovsky. 2015: [Electronic resource]. Access from the legal reference system "Consultant Plus".
8. Khnykin, G.V. (2003). Employment contract: problems of the new labor law and practice issues. *Jurisprudence*, No. 6, pp. 47-56.
9. Chikanova, L.A. (2004). Rights of employees and employers upon admission (hiring) for work. *Economy and law*, No. 10.
10. Lomakina, L.A. (2006). *Issues of concluding and terminating an employment contract*. Abstract diss. . cand. legal Sciences. Moscow.

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Islombek Musurmonovich Norbutayev

Denau Institute of Entrepreneurship and Pedagogy
Teacher, Uzbekistan

OPPORTUNITIES AND PROSPECTS FOR NATIONAL DEVELOPMENT OF THE UZBEK SOCIETY AT THE CURRENT STAGE OF DEVELOPMENT

Abstract: This article analyzes the national development of Uzbek society at a new stage of historical development and its various beliefs, conditions and prospects for their implementation. In addition, the historical significance of the idea of "from national revival to national progress" and its role in ideological processes are analyzed in detail.

Key words: idea, idealism, national idea, development, progress, social life, key spiritual features.

Language: English

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Introduction

Over the past five years, a wide range of organizational and legal measures have been taken to develop parliamentary and strengthen the people's power, to ensure accountability of public administration. A new management system and modern structures have been created. A system of popular decision-making based on openness and fairness has been formed in public administration.

Literature review.

The political activity of the population and parties in society, the role of civil society institutions, the influence of the media is growing day by day. The principles of democracy, the rule of law have reached a qualitatively new level. The situation in the field of human rights has also changed radically. Forced labor and child labor were completely eliminated. We have adopted a national human rights strategy. Our membership in the UN Human Rights Council is itself a high international recognition of our policy.

The uncompromising fight against corruption in society has reached a new level. Important legislation has been passed in this regard and the Anti-Corruption Agency has been established.

In the economy, work has been done to free the country from economic isolation, that is, from

isolation, and to liberalize it in proportion to demographic growth. In the short term, the liberalization of the foreign exchange market, strengthening the integration of the national economy with international economic systems, reducing state participation in it, modernization of agriculture, further development of small business and private entrepreneurship have been achieved.

For the first time in the recent history of Uzbekistan, poverty reduction has begun. In all districts and cities, in every mahalla, a completely new system of targeted work with needy families, women and youth has been introduced - the "iron notebook". Hundreds of thousands of citizens have been employed through this system.

Research Methodology.

Many changes have taken place in the country in the field of interconnected education - preschool education, school education, secondary special and higher education systems, the development of research institutions.

The only goal is to turn preschool and school education, higher and secondary special education and scientific and cultural institutions into the four pillars of the Third Renaissance, and our kindergarten teachers, schoolteachers, professors and scientific and

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creative intellectuals into the four pillars of the new Renaissance.

In order to further reform the health care system and radically improve the quality of medical services to the population, the work on further improving the activities of rural medical centers, emergency medical services, specialized medical centers is bearing fruit.

The situation with religious freedom and interethnic harmony in our country has also radically improved. At the plenary session of the UN General Assembly, the resolution "Enlightenment and Religious Tolerance" proposed by Uzbekistan was adopted. In order to preserve our centuries-old national and religious values, to study the heritage of our ancestors who have made a great contribution to the development of world science and culture, on this basis, research centers, scientific and educational institutions have been established.

Over the past period, in the field of foreign policy, significant results have been achieved in the development of friendly and mutually beneficial relations with foreign countries, especially with neighboring countries. The principle "Central Asia is the main priority in the foreign policy of Uzbekistan" has been put into practice. As a result, a completely new political environment has been created in our region, and relations based on mutual trust and good neighborliness are being strengthened.

Cooperation with the United States, Russia, China, Japan, South Korea, Turkey, the European Union and Muslim countries has reached a new level.

We continue our mutually beneficial relations with international organizations such as the United Nations, the Inter-Parliamentary Union, the Organization for Security and Cooperation in Europe, the Organization of Islamic Cooperation, the Shanghai Cooperation Organization, and the Commonwealth of Independent States. Our cooperation with the European Bank for Reconstruction and Development has been restored, and partnerships have been established with the European Investment Bank. Cooperation with the World Bank, the International Monetary Fund, the Asian Development Bank, the Islamic Development Bank, the Asian Infrastructure Investment Bank is becoming more effective.

As a result of positive changes in our country, our resolute efforts in the international arena, the interest and confidence in Uzbekistan in the world community is growing, the prestige and reputation of our country is growing, our country is rising in international indexes.

In this regard, if we analyze the process of development in recent years on the basis of the works of the President, in particular, the Addresses to the Oliy Majlis and the State Programs adopted on this basis, the possibility of fully understanding and imagining the content, goals and directions of this strategic path.

Since the first Address to the Oliy Majlis submitted by Shavkat Mirziyoyev on December 22, 2017, each Address of the President of our country has, first of all, become an expression of the creative aspirations and noble goals of our people. First of all, in each of his Addresses, the President clearly defines the scope of work done last year, the analysis of the achieved results, as well as the goals and objectives for the future, the main directions of development of our country, the measures to be implemented. In short, the Addresses of the President serve as a program for the successful implementation of comprehensive socio-economic reforms in the country, strict adherence to openness and transparency in ensuring the effectiveness of profound democratic changes in state and society building. In fact, each of the Appeals identifies the most important priorities for the development of our country[1].

Analysis and results.

Indeed, the Address of the President to the Oliy Majlis sets out specific measures and tasks in the most important areas of state and public life. Every year, which is becoming an important stage in the strategy of action, our creative work on the priorities of socio-economic development is undoubtedly aimed at raising the welfare of the people to a higher level. In particular, 21 trillion sums and 1 billion sums were allocated under the state program adopted in 2018, which was declared the Year of Active Entrepreneurship, Support of Innovative Ideas and Technologies. The implementation of 76,000 projects worth \$ 1 billion has served to ensure the practical results of the plans put forward by the President. Happily, real incomes of the population increased by 12% compared to 2017. Simultaneously with the funds allocated for the integrated development of the regions, the overpaid part of taxes, ie 5.5 trillion soums, was left in the regions. It is gratifying that this figure is 6 times higher than in 2017 and 32 times higher than in 2016. Emphasizing that the interests of the people take precedence over everything, the President paid constant attention to the fact that the continuous improvement of the living conditions of our people is the essence of socio-economic reforms. For this purpose, 3 trillion soums have been allocated for the implementation of the "Obod Qishloq" and "Obod Mahalla" programs, as a result of which 416 villages have been modernized. In particular, the implementation of the programs "Every family is an entrepreneur", "Youth is our future" has become an important factor in the social activation of the population, especially the younger generation.

In ensuring the priority of human interests, the President first of all drew attention to the fact that sustainable economic growth is an important factor. Indeed, the creation of decent living conditions for our people, the satisfaction and satisfaction of life with the changes taking place in the economy, the fact that the

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results of reforms are reflected in the activities and lifestyles of our people - a sign of effectiveness. Such efficiency is determined by the social life, culture and enlightenment of the people[2]. Eventually, such changes will be accompanied by a change in thinking, creativity and initiative of the people. "Creating the necessary conditions for productive work, decent wages, modern housing, quality education and health care, ample opportunities for recreation and leisure - all these are important factors that determine the essence and content of our economic reforms." The President pays special attention to the urgency of the tasks set in the economic sphere. In particular, proposing to name 2019 the "Year of Active Investment and Social Development", he noted that, first of all, the launch of new production facilities through the attraction of investments, the acceleration of economic development. Economic development, in turn, provides an opportunity to solve social problems. Thus, while outlining the consistent implementation of economic reforms and our goals, the tasks of the new era of economic reforms include the radical improvement of the open economy, healthy competition, business and investment climate. Along with reducing state participation in the economy, special attention was paid to the development of the private sector, modernization of the economy, strengthening the fight against the "hidden" economy, currency liberalization and, finally, the training of leaders and initiators of economic reforms. Within the framework of the implementation of these goals and objectives, eleven priorities in the field have been identified[3]. The plans, requirements and tasks set in each direction create opportunities for the realization of strategic goals of economic development. In particular, ensuring macroeconomic stability, consistent continuation of active investment policy, expansion of private and foreign capital in the banking and financial system, paving the way for social interest in tax policy, legal, financial and moral support of entrepreneurship, development of its leading sectors through the continuation of institutional and structural reforms to reduce state participation in the economy and the transition to an

export-oriented economy, integrated and balanced socio-economic development of regions, districts and cities, The rational use of existing opportunities for agricultural development, our activities aimed at ensuring food security will serve for national development[4]. At the current stage of development of our country, the implementation of social and spiritual-enlightenment reforms is also important among the areas related to strategic development. The main tasks in this regard are clearly defined in the Decree of President Shavkat Mirziyoyev dated February 7, 2017 "On the Strategy of Actions for the further development of the Republic of Uzbekistan" and the Action Strategy approved by him.

It should be noted that in his Addresses, the President identified all the opportunities, conditions and material and spiritual resources associated with the implementation of the measures outlined in the Action Strategy.

The next Address of President Shavkat Mirziyoyev to the Oliy Majlis coincides with an important political process in the social life of Uzbekistan, which is on the path of renewal - the elections to local councils of people's deputies and the Legislative Chamber of the Oliy Majlis. In his address, the President expressed his views on the elections, noting that the ongoing democratic reforms in our country are also reflected in this political process.

Conclusion.

Indeed, the elections held under the motto "New Uzbekistan - New Elections" once again demonstrated the political activism, consciousness and culture of our people and became a vital expression of the President's words of confidence that we will build a new Uzbekistan together with our people.

In short, there is every reason to say that today in a historically short period of time in our country has created a completely new political, legal, socio-economic, scientific, educational and cultural environment. At present, our country is waiting for the implementation of plans and programs in this area.

References:

1. Shermuhamedov, S. (1999). *Biz kandaj zhamijat kurmokdamiz?* -Toshkent: «Ўzbekiston».
2. Otamuratov, S. (2013). *Globallashuv va millij-ma#navij havfsizlik.* (p.456). Toshkent: O'zbekiston.
3. Mirzijojev, Sh. (2018). *Millij tarakkijot jylimizni kat#ijat bilan davom jettirib, jangi boskichga kytaramiz.* 1-zhild. (p.121). Tashkent: «Ўzbekiston».
4. Karimov, I. (2001). *Ma#navijat, falsafa va xajot.* (p.124). Toshkent: Fan.
5. Ergashev, I. (2021). Civil society and youth. *Science and Education*, T. 2, №. 2.

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6. Norbutayev, I. M. (2021). The way of independent development a key factor of national revival and progress of Uzbekistan. *Oriental renaissance: Innovative, educational, natural and social sciences*, T. 1, №. 11, pp. 837-841.
7. Ergashev, I., & Farxodjonova, N. (2020). Integration of national culture in the process of globalization. *Journal of Critical Reviews*, T. 7, №. 2, p.477.
8. Ergashev, I. (n.d.). *Uzbekistan's national ideology in the context of democratic society development //1000 kopii.* (p.18).
9. Musurmonovich, N. T. I. (2021). Milliy yuksalish g 'oyasining jamiyat yangi bosqichi taraqqiyoti uchun ijtimoiy ahamiyati. *Oriental renaissance: Innovative, educational, natural and social sciences*, T. 1, №. 5, pp. 439-444.
10. Ergashev, I., & Sapayev, V. (2022). Milliy g 'oya tizimi tarkibiy tuzilishining o 'ziga xos xususiyatlari. *Scientific progress*, T. 3, №. 2, pp. 198-204.
11. Sapayev, V. O., et al. (2020). The actuality of improvement in rural social standard of living in Uzbekistan. *Scientific Bulletin of Namangan State University*, T. 2, №. 11, pp. 147-151.

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Khusan Muhammadiev

Samarkand branch of Tashkent University of Information Technologies
senior lecturer
Uzbekistan

POTENTIALITY AND VIRTUALITY IN THE PHILOSOPHY OF MODERN TIMES

Abstract: The paradigmatic elements of virtualism, which are part of the postclassical [1] sciences, have a conceptual impact on almost all problematic areas of modern philosophy. This gives an opportunity to take a fresh look at issues considered traditional and unconventional in philosophy. This, in particular, is evidenced by the analysis of philosophical and ontological issues from the point of view of postclassical scientific views and approaches. This article philosophically analyzes the content and essence of the concepts of virtuality and virtual reality, virtual situations in space and time, as well as the dialectic of potentiality and reality.

Key words: virtuality, virtual reality, being, reality, space, time, singularity, potentiality.

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ПОТЕНЦИАЛЬНОСТЬ И ВИРТУАЛЬНОСТЬ В ФИЛОСОФИИ НОВОГО ВРЕМЕНИ

Аннотация: Парадигматические элементы виртуалистики, входящие в состав постклассических [1] наук, оказывают концептуальное воздействие практически на все проблемные области современной философии. Это дает возможность по-новому взглянуть на вопросы, считающиеся традиционными и нетрадиционными в философии. Об этом, в частности, свидетельствует анализ философско-онтологических вопросов с точки зрения постклассических научных взглядов и подходов. В данной статье философски анализируются содержание и сущность понятий виртуальности и виртуальной реальности, виртуальных ситуаций в пространстве и времени, а также диалектика потенциальности и реальности.

Ключевые слова: виртуальность, виртуальная реальность, бытие, реальность, пространство, время, сингулярность, потенциальность.

Введение

Человечество вступило в мир постиндустриальной цивилизации, состоящей из глобализированных, информатизированных и компьютеризированных социально-экономических и культурных структур. Эта цивилизация строит инновационный мир на основе постклассической культуры, науки и техники, в определенном смысле революционный, используя весь творческий потенциал, накопленный в прошлом веке. Под влиянием информационной и научно-технической революции онтологические воззрения

приобретают новый облик в рамках постклассической философии. Линии этого образа - многогранность, нелинейность природы виртуальности, виртуальной реальности, виртуального мира, которая проявляется в новом взгляде на это бытие.

МЕТОДЫ

Так что же такое сама виртуальность? Понятие виртуальности происходит от латинского и означает «virtus» — «гипотетический», «воображаемый». В древнеримской культуре слово «virtus» понималось в четырех смыслах:

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➤ это нравственная ценность, добродетель (например, по-английски «virtus» означает добродетель);

➤ это некоторая актуальная, существующая и влияющая реальность;

➤ какой-то артефакт;

➤ виртуальность больше синонимична воображаемому, гипотетическому, потенциальному, нереальному [2].

Проблема виртуальности является одной из важных проблем постклассической науки. Отдельной линией по этой проблеме является становление и развитие виртуалистики. Виртуалистика как философское направление формировалась с 80-х и 90-х годов XX века. Если быть более конкретным, то датой создания виртуалистики принято считать 1986 год. Поскольку во вступительной части своей статьи «Виртуальное состояние в деятельности человека-оператора» этого года русский философ О.И. Генисарецкий подчеркивает, что понятие виртуального явления представляет собой новый тип идеи.

Российская школа виртуалистов выделяет четыре ее основные черты вне зависимости от сферы, в которой используется виртуальная реальность:

□ Следствие (виртуальная реальность все равно становится любой другой активной реальностью).

□ Актуальность (виртуальная реальность только актуальна, у нее есть свое пространство и время).

□ Интерактивность (виртуальная реальность работает в связке со всеми другими реальностями, в том числе и с тем, что они имеют последствия независимо друг от друга).

□ Независимость (в виртуальной реальности свои правила) [3].

Именно эти качества отличают виртуальную реальность от других реальностей. Эти черты являются неотъемлемыми чертами виртуальной реальности.

Ученые по-разному определяют понятие виртуальной реальности. В частности, по Н.А. Носову, виртуальная реальность не является субстанциальным атрибутом, существующим самостоятельно. «Объект виртуальности, — пишет Носов, — существует, но не субстанциально» [4]. Ученый пытается объяснить смысл понятия виртуальной реальности через понятия виртуального объекта и каузативной (порождающей) реальности. Согласно этому подходу совокупность виртуальных объектов, возникающих из порождающей (постоянной) реальности, создает виртуальную реальность [5]. По Р. А. Нуриллину, виртуальная реальность — это виртуальное пространство, принимающее форму матрицы небытия, являющейся основой

существования. В основе бытия лежит небытие. В небытии есть информационные точки, состоящие из «нулевых точек», которые являются возможностями, создающими бытие. Совокупность информационных точек образует виртуальное пространство. Процессы, происходящие в информационном виртуальном пространстве, превращают небытие в бытие. Связывая виртуальность со свойством восприятия, П.Е. Солопов развивает мысль о том, что виртуальная реальность есть отражение восприятия. Автор идеи, как методологическая и гносеологическая инструкция, опирается на 46 атрибутивных интерпретаций информации. Существует также интерпретация виртуальной реальности на основе семиотического подхода, автором которой является В. М. Розин. По его мнению, виртуальность проявляется через знаки и носит символический характер. Множественность таких разнообразных подходов и определений сущности виртуальной реальности делает ее сложной категорией. На наш взгляд, эти определения раскрывают многие стороны виртуальной реальности, но не раскрывают полностью их сущность. На основе изложенных выше подходов виртуальную реальность можно охарактеризовать следующим образом: виртуальная реальность — это вид реальности, выражающий состояние, связывающее предыдущую и последующую постоянную реальность, порожденную реальными явлениями, процессами и событиями, определяющее переход от первичности к бытию, проявляющееся в таких свойствах, как склонность, промежуточное состояние, потенция, возможность, модель. Это определение обобщает факты виртуальной реальности, развитого воображения, основные идеи науки виртуализации, которые можно использовать в качестве рабочей гипотезы.

Виртуальная реальность имеет свою сущность в бытии. Обычно под бытием понимают наиболее общую и универсальную философскую категорию, охватывающую все формы (материальные и духовные), виды (реальные и нереальные) и проявления (прошлое, настоящее и будущее) бытия. Бытие имеет свои формы существования: пространство, время и движение. Мы анализируем пространство, время и их отношение к виртуальности, что является одной из постклассических проблем.

Пространство и время являются общими формами существования бытия, пространство выражает порядок и масштаб взаимного расположения мирообразующих предметов и их составных точек, а время выражает порядок и продолжительность последовательности возникновения явлений и процессов, происходящих в мир. Существуют метрические свойства и топологические особенности

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пространства и времени [6], а виртуальность придает этим свойствам новый смысл и содержание.

Хотя в пространстве существуют различные виртуальные процессы, эти виртуалы также придают новое значение самому пространству. Пространство, будучи бесконечным, также имеет виртуальную сферу. Виртуальная сфера носит общенаучный характер и включает в себя несколько сфер, таких как биосфера, литосфера и ноосфера. Одним из ключевых аспектов, обеспечивающих существование виртуальной сферы, являются виртуальные частицы. Виртуальные частицы [7] являются основным средством взаимодействия, связи, обмена информацией между сферами. Виртуальная сфера варьируется от микрообъектов до мегавселенной. Примером такой сферы является растение, животное, биоаура человека, земная биосфера, движение галактик в определенной сфере и так далее.

РЕЗУЛЬТАТЫ

В результате современной информационной и научно-технической революции формируются представления о виртуальном пространстве и времени. Обозначение виртуального пространства и времени есть само реальное пространство и время. Если к реальным пространственно-временным событиям относятся естественные, причинные, необходимые и вероятные процессы, то к творцам виртуального пространства и времени относятся искусственные, программные и модельные процессы, в том числе компьютерные и вычислительные технологии. В пространстве, созданном на основе компьютерных технологий, процессы отражения протекают в мультимедийном режиме, тогда как в реальном пространстве события происходят естественным образом. Виртуальное пространство, в отличие от реального, обладает такими чертами, как искусственность, моделирование, нереальность. Искусственность виртуального пространства можно объяснить тем, что оно создано человеческим разумом, моделированием на основе компьютерных технологий, возможностью работы с нереальными воображаемыми объектами. Особенность виртуального времени в том, что его можно повернуть вспять, остановить и, соответственно, заглянуть в будущее. В виртуальном пространстве и времени вещи и события можно останавливать, замедлять, ускорять, перемещать вперед, назад, приостанавливать и модифицировать по желанию. И движение не имеет статуса абсолютной переменной. Развитие может быть обратным, то есть обратимым: разнообразные взаимодействия могут проявлять таинственные свойства,

неизвестные в контексте привычной нам обыденной причинности.

Как и реальное пространство, виртуальное пространство многомерно. Примером многомерности виртуального пространства являются фильмы в формате 5D, 7D.

ОБСУЖДЕНИЕ

Реальные процессы и виртуальные процессы существуют одновременно. Например, в сингулярных точках (виртуальных точках), где гравитационное поле сильное, полностью меняется природа пространства, и, как следствие, соответственно резко меняются его свойства. Что такое особые точки? Сингулярность — это концентрированное скопление очень большой массы в какой-то небольшой виртуальной точке пространства. В таких точках измерения пространства уплотняются и обвиваются вокруг одной точки, в результате чего размеры пространства изменяются во времени. Пространство остается одномерным и необратимым по своей природе, а время квантуется и становится многомерной, разнонаправленной реальностью. В этой точке любое измерение пространства является лишь центрированным и необратимым, а течение времени разбивается на определенные кванты времени, которые имеют отдельные направления в каждой точке [8]. Мы можем видеть проявление виртуальности в реальном пространстве снова в виртуальных частицах, или в превращении вещей и событий из потенциальности в реальность. Здесь возможность в некотором смысле отражает природу виртуальности, но потенция не должна пониматься как виртуальность. Считается, что превращение потенциальности в действительность носит вероятностный характер. Чем ниже уровень вероятности потенциальности, тем конкретнее ее реализация. «Есть два пути реализации возможности: во-первых, должны быть достаточные условия для того, чтобы процесс в состоянии почвы стал реальностью; во-вторых, чтобы сама потенция не противоречила объективным условиям и законам, существующим в природе и обществе» [9]. Следовательно, потенциальность означает наличие условий для появления объекта или, по крайней мере, отсутствие таких условий для появления объекта. При этом следует отличать потенциальность от непотенциальности. Основное различие между ними связано с вероятностью воплощения в реальность. Основное различие между такими видами потенциальности, как реальная и абстрактная, также зависит от уровня величины вероятности. Каждая потенциальность имеет определенную форму и значение по мере того, как она становится реальностью.

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Понятия потенциальности и виртуальности - это понятия, близкие друг другу по смыслу и содержанию и взаимодействующие друг с другом. Следует отметить, что отношения между этими двумя понятиями находятся, прежде всего, в отношениях частичной совместимости. Между ними просматриваются отношения частичной совместимости: во-первых, виртуальность есть в некотором смысле потенциальная реальность, ибо виртуальная реальность есть еще не завершившееся событие, незавершенное бытие; во-вторых, эти два понятия выражают свою сущность через категорию реальности. В то же время потенциальность существует и в возможном состоянии, таком как виртуальность.

Здесь формирование понятия виртуальности приводит к развитию понятия потенциальности. Виртуальность придает потенциальности новый смысл и содержание. Виртуальность раскрывает свою сущность через понятие потенциальности и реальности.

ЗАКЛЮЧЕНИЕ

Хотя понятия потенциальности и виртуальности схожи между собой, между ними существуют определенные различия. Но различие между ними нельзя определить, установив конкретную границу, потому что эти два понятия очень близки и взаимосвязаны. Разница между виртуальностью и потенциальностью заключается в следующем:

во-первых, потенциальность есть вероятность, то есть вероятность того, что она станет реальностью или нет. Виртуальный объект существует в реальной жизни и всегда актуален;

во-вторых, виртуальная реальность всегда создается из какой-то первой (постоянной) реальности, и виртуальная реальность может породить другую виртуальную реальность на следующем уровне, и этот процесс бесконечен. Превращение возможности в действительность означает появление новой вещи или события;

в-третьих, потенциальность примет определенную форму, когда станет реальностью. С другой стороны, виртуальность относится к состоянию бытия.

Таким образом, новые проявления вещей и событий изучаются и анализируются путем изменения событий и состояний в виртуальном пространстве и времени существования. Виртуалистский подход к бытию и идеям дает возможность описывать, изучать закономерности миростроительства, то есть онтологического творчества, и синергетические, глобалистские, экологические, виртуалистические идеи и подходы, находящиеся в авангарде постклассических научных исследований и демонстрирующие фундаментальные результаты, играют важную роль в развитии новой модели философии и онтологии 21 века.

References:

1. Kohanovskij, A.P. (1999). *Filosofija i metodologija nauki*. (pp.41-44). Rostov n/D: Feniks.
2. Nosov, N.A. (1999). Virtual`naja real`nost`. *Voprosy filosofii*, №10, pp.156-158.
3. Tўraev, B.O. (2009). *Xozirgi zamon tabiatshunosligi konsepcijalari*. (p.15). Tashkent:Tafakkur.
4. Turaev, B.O. (2011). *Borlik: moxijati, shakllari, hususijati. (Borlik falsafasi) "Tafakkur"*. (pp.16-44). Toshkent.
5. Kўshokov, Sh.S. (1996). *Dialektika. Rivozhlanish konsepcijasi*. (pp.43-44). Samarkand.
6. Nosov, N.A. (2001). Manifest virtualistiki. *Trudy laboratorii virtualistiki*. Vyp.15, Moscow:" Put'", p.17.
7. Nosov, N.A. (1999). Virtual`naja real`nost`. *Voprosy filosofii*, № 10, p.156.
8. Nurullin, R.A. (2004). *Virtual`nost` kak osnovanie bytija*. Monografija. (pp.8-14). Kazan: KazGU.
9. Solopov, P. E. (1998). Virtual`naja real`nost` kak otrazhenie otrazhenija. *Trudy laboratorii virtualistiki*. Vyp.4. Virtual`nye real`nosti, M..
10. Rozin, V.M. (2000). *Sushhestvovanie, real`nost`, virtual`naja real`nost`*. Konsepcija virtual`nyh mirov i nauchnoe poznanie, SPb. .
11. Alikulov, S., & Rizaev, I. I. (2021). *Obrazovanie i sovremennye tehnologii. Modelirovanie i konstruirovaniye v obrazovatel`noj srede*, 27-31.
12. Safarov, A. I., & Rizaev, I. I. (2021). *Vozmozhnosti i perspektivy jekoturizma v uzbekistane. Jekonomika i upravlenie gostepriimstvom territorii*, 123-127.
13. Ganiev, K., & Rizaev, I. I. (2021). *Konstruktivnye i destruktivnye aspekty liberalizacii social`noj sistemy: filosofskij*

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- podhod. *Vestnik Prikamskogo social'nogo instituta*, (2 (89)), 156-162.
14. Rizaev, I. I., & Muminova, Z. O. (2021). *Professional'naja podgotovka lichnosti: ozdorovlenie i duhovnoe vospitanie*. Sistema menedzhmenta kachestva v vuze: zdorov'e, obrazovannost', konkurentosposobnost'. (pp.264-268).
 15. Rizaev, I. (2021). Liberalization of the social system: constructive and destructive aspects. *TRANS Asian Journal of Marketing & Management Research*, 10(4), 58-64.
 16. Rizaev, I. I. (2021). *Problemy liberalizacii obshhestva v kontekste globalizacii. Ontologicheskie i sociokulturnye osnovaniya al'ternativnogo proekta globalizacii*. (pp.254-257). Ekaterinburg.
 17. Rizaev, I. I. (2020, April). *Struktura social'noj sistemy-osnova samoorganizacii obshhestva*. In Dni nauki-2020» III Mezhdunarodnaja nauchno-prakticheskaja konferencija. GOU VPO «Donbasskaja agrarnaja akademija. (Vol. 5, pp. 45-51).
 18. Khayitboy, K., & Ilhom, R. (2020). The impact of liberalization on the development of the social system. *International Engineering Journal For Research & Development*, 5(3), 4-4.
 19. Rizaev, I. I. (2019). Evolutionary mechanisms of self-organization of the social system. *Scientific Bulletin of Namangan State University*, 1(9), 81-86.
 20. Rizaev, I. I. (2019). The structure of the social system as the basis for the self-organization of society. *Scientific Bulletin of Namangan State University*, 1(7), 190-195.
 21. Rizaev, I. I. (2020). *Sinergeticheskij podhod k samoorganizacii social'nyh sistem*. Filosofija innovacij i sociologija budushhego v prostranstve kul'tury: nauchnyj dialog., (pp.294-300).
 22. Alikulov, S. A., & Rizaev, I. I. (2020). Methodological problems of research of social systems. *Theoretical & Applied Science*, (2), 717-720.
 23. Alikulov, S. A., & Rizaev, I. I. (2021). *Metodologicheskie osnovy jekonomicheskogo regulirovanija cherez denezhno-kreditnuu politiku*. In Aktual'nye problemy jekonomiki, ucheta, audita i analiza v sovremennyh uslovijah (pp. 13-16).
 24. Alikulov, S. A., & Rizaev, I. I. (2021). *Osnovy upravlenija i ocenki jeffektivnost'u predpriyatija*. In Fundamental'nye i prikladnye aspekty globalizacii jekonomiki. (pp. 233-235).

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Contents

		p.
70.	Chemezov, D., et al. Reference data of pressure distribution on the surfaces of airfoils having the names beginning with the letter G (the second part).	901-984
71.	Tukhtabaev, J. Sh., et al. The system of state regulation and support of agricultural exports.	985-988
72.	Mazitov, R. Y., Pazylov, N. A., & Omorova, G. S. Environmental and legal education as a need for the development of modern society.	989-992
73.	Omorova, G. S., Pazylov, N. A., & Mazitov, R. Y. Current issues of concluding civil law contracts in the field of labor law.	993-995
74.	Norbutayev, I. M. Opportunities and prospects for national development of the Uzbek society at the current stage of development.	996-999
75.	Muhammadiev, Kh. Potentiality and virtuality in the philosophy of modern times.	1000-1004

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