

FIȘĂ DE VERIFICARE A ÎNDEPLINIRII STANDARDELOR MINIMALE PENTRU **ABILITARE - Științe Inginerești**

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Domeniul INGINERIE MECANICA

**Indicatori: I1 = 4.09 > 4; P = 8.81 > 2; C = 16.8 > 5****Fișă pentru verificarea indicatorilor I1 și P (I1 > 4; P > 2)**

Nur	Referința bibliografică	si	ni	pi	si/ni	si/pi
1	Szilagy B, Susan-Resiga R.F., Sofonea V., Lattice Boltzmann approach to viscous flows between parallel plates, International Journal of Modern Physics C, ISSN 0129-1831, Vol. 6, Issue 3, pp. 345-358, 1995, DOI: 10.1142/S0129183195000253	0.53501	3	0	0.1783351	0
2	Susan-Resiga R.F., Atassi H.M., A domain-decomposition method for the exterior Helmholtz problem, Journal of Computational Physics, ISSN 0021-9991, Vol. 147, Issue 2, pp. 388-401, dec. 1998, DOI: 10.1006/jcph.1998.6094	2.91118	2	1	1.4555904	2.911181
3	Susan-Resiga R.F., Atassi H.M., Domain-decomposition method for time-harmonic aeroacoustic problems, AIAA Journal, ISSN 0001-1452, Vol. 39, Issue 5, pp. 802-809, may 2001, DOI: 10.2514/2.1413	2.25097	2	1	1.1254826	2.250965
4	Boia E.S., Susan-Resiga R.F., Raicov P.C., Popoiu C.M., Iacob R.E., Determination of the mechanical requirements for a progressive correction system of pectus excavatum in children, Journal of Laparoendoscopic & Advanced Surgical Techniques, ISSN 1092-6429, Vol. 15, Issue 5, pp. 478-481, oct. 2005, DOI: 10.1089/lap.2005.15.478	0.66112	5	0	0.1322245	0
5	Susan-Resiga R.F., Ciocan G.D., Anton I., Avellan F., Analysis of the swirling flow downstream a Francis turbine runner, Journal of Fluids Engineering, ISSN 0098-2202, Vol. 128, Issue 1, pp. 177-189, jan. 2006, DOI: 10.1115/1.2137341	1.08649	4	1	0.2716237	1.086495
6	Marsavina L., Susan-Resiga R.F., Faur N., Negru R., Methodology to assess integrity with application to collector copper lamellas, Theoretical and Applied Fracture Mechanics, ISSN 0167-8442, Vol. 53, Issue 2., pp. 136-144, Apr. 2010, DOI: 10.1016/j.tafmec.2010.03.004	1.35357	4	0	0.3383915	0
7	Susan-Resiga R.F., Muntean S., Hasmatuchi V., Anton I., Avellan F., Analysis and prevention of vortex breakdown in the simplified discharge cone of a Francis turbine, Journal of Fluids Engineering, ISSN 0098-2202, Vol. 132, Issue 5, CDI 051102, May 2010, DOI: 10.1115/1.4001486	1.08649	5	1	0.2172989	1.086495
8	Susan-Resiga R.F., Muntean S., Avellan F., Anton I., Mathematical modeling of swirling flow in hydraulic turbines for the full operating range, Applied Mathematical Modelling, ISSN 0307-904X, Vol. 35, Issue 10, pp. 4759-4773, Oct. 2011, DOI: 10.1016/j.apm.2011.03.052	1.47934	4	1	0.3698347	1.479339
<b>TOTAL:</b>					<b>I1</b>	<b>P</b>
					<b>4.088781</b>	<b>8.81447</b>

**Fișă pentru verificarea indicatorului C (C > 5)**

s ni s/ni

<b>Susan-Resiga R.F., Ciocan G.D., Anton I., Avellan F., Analysis of the swirling flow downstream a Francis turbine runner, Journal of</b>		<b>9.905008</b>	<b>4</b>	<b>2.476252</b>
1	Frewer M., Oberlack M., Guenther S., "Symmetry investigations of the incompressible stationary axisymmetric Euler equations" 1.2818			
2	Iliescu M.S., Ciocan G.D., Avellan F., "Analysis of the cavitating draft tube vortex in a Francis turbine using Particle Image Velocimetry measurements in two-phase flow", Journal of Fluids Engineering, ISSN 0098-2202, Vol. 130, Issue 2, Article number 021105, 2008, DOI: 10.1115/1.2813052 1.08649			
3	Chen C., Nicolet C., Farhat M., Avellan F., Tsujimoto Y., "One-dimensional analysis of full load draft tube surge", Journal of Fluids Engineering, ISSN 0098-2202, Vol. 130, Issue 4, Article number 041106, 2008, DOI: 10.1115/1.2903475 1.08649			
4	Zhang R.-K, Mao F., Wu J.-Z., Chen S.-Y., Wu Y.-L., Liu S.-H., "Characteristics and control of the draft tube flow in part-load Francis turbine", Journal of Fluids Engineering, ISSN 0098-2202, Vol. 131, Issue 2, Article number 021101, 2009, DOI: 10.1115/1.3002318 1.08649			
5	Arpe J., Nicolet C., Avellan F., "Experimental evidence of hydroacoustic pressure waves in a Francis turbine elbow draft tube for low discharge conditions", Journal of Fluids Engineering, ISSN 0098-2202, Vol. 131, Issue 8, Article number 081102, 2009, DOI: 10.1115/1.3155944 1.08649			
6	Yexiang X., Zhengwei W., Zongguo Y., Mingan L., Ming X., Dingyou L., "Numerical analysis of unsteady flow under high-head operating conditions in Francis turbine", Engineering Computations, ISSN 0264-4401, Vol. 27, Issue 3., pp. 365-386, 2010, DOI: 10.1108/02644401011029934 1.0303			
7	Qian Z.D., Zheng B., Huai W.X., Lee Y.H., "Analysis of pressure oscillations in a Francis hydraulic turbine with misaligned guide vanes", Proc. of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, ISSN 0957-6509, Vol. 224, Issue 1, pp. 139-152, 2010, doi: 10.1243/09576509JPE736 0.87102			
8	Tridon S., Barre S., Ciocan G.D., Tomas L., "Experimental analysis of the swirling flow in a Francis turbine draft tube: Focus on radial velocity component determination", European Journal of Mechanics B/Fluids, ISSN 0997-7546, Vol. 29, Issue 4, pp. 321-335, 2010, doi: 10.1016/j.euromechflu.2010.02.004 1.50489			
9	Qian Z.D., Li W., Huai W.X., Wu Y.L., "The effect of runner cone design on pressure oscillation characteristics in a Francis hydraulic turbine", Proc. of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, ISSN 0957-6509, online Oct.13, 2011, doi: 10.1177/0957650911422865 0.87102			
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<b>Susan-Resiga R.F., Atassi H.M., A domain-decomposition method for the exterior Helmholtz problem, Journal of Computational</b>		<b>18.40667</b>	<b>2</b>	<b>9.2033334</b>
1	Harari I., "A survey of finite element methods for time-harmonic acoustics", Computer Methods in Applied Mechanics and Engineering, ISSN 0045-7825, Vol. 195, Issue 13-16, pp. 1594-1607, 2006, DOI: 10.1016/j.cma.2005.05.030 3.47934			

2	Ianculescu C., Thompson L.L., "Parallel iterative solution for the Helmholtz equation with exact non-reflecting boundary conditions", Computer Methods in Applied Mechanics and Engineering, ISSN 0045-7825, Vol. 195, Issue 29-32, pp. 3709-3741, 2006, DOI: 10.1016/j.cma.2005.02.030	3.47934		
3	Thompson L.L., "A review of finite-element methods for time-harmonic acoustics", Journal of the Acoustical Society of America, ISSN 0001-4966, Vol. 119, Issue 3, pp. 1315-1330, 2006, DOI: 10.1121/1.2164987	1.47761		
4	Erlangga Y.A., "Advances in iterative methods and preconditioners for the Helmholtz equation", Archives of Computational Methods in Engineering, ISSN 1134-3060, Vol. 15, Issue 1, pp. 37-66, 2008, DOI: 10.1007/s11831-007-9013-7	4.39118		
5	Engquist B., Ying L., "Sweeping preconditioner for the Helmholtz equation: Hierarchical matrix representation", Communications on Pure and Applied Mathematics, ISSN 0010-3640, Vol. 64, Issue 5, pp. 697-735, 2011, DOI: 10.1002/cpa.20358	5.57919		
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<b>Mclnnes, L.C., Susan-Resiga R.F., Keyes D., Atassi H.M., "Additive Schwarz Methods with Nonreflecting Boundary Conditions for the</b>		<b>16.70566</b>	<b>4</b>	<b>4.1764159</b>
1	Gander M.J., Magoules F., Nataf F., "Optimized Schwarz methods without overlap for the Helmholtz equation", SIAM Journal on Scientific Computing, ISSN 1064-8275, Vol. 24, Issue 1, pp. 38-60, 2002.	2.38509		
2	Achdou Y., Japhet C., Maday Y., Nataf F., "A new cement to glue non-conforming grids with Robin interface conditions: The finite volume case", Numerische Mathematik, ISSN 0029-599X, Vol. 92, Issue 4, pp. 593-620, 2002, DOI: 10.1007/s002110100336	2.29503		
3	Kim S., Kim S., "Multigrid Simulation for High-Frequency Solutions for the Helmholtz Problem in Heterogeneous Media", SIAM Journal on Scientific Computing, ISSN 1064-8275, Vol. 24, Issue 2, pp. 684-701, 2002.	2.38509		
4	Gander M.J., Halpern L., "Absorbing boundary conditions for the wave equation and parallel computing", Mathematics of Computation, ISSN 0025-5718, Vol. 74, No. 249, pp. 153-176, 2005.	1.98137		
5	Zhuang Y., Sun X.-H., "A high-order fast direct solver for singular Poisson equations", Journal of Computational Physics, ISSN 0021-9991, Vol. 171, Issue 1, pp. 79-94, 2001, doi:10.1006/jcph.2001.6771.	2.91118		
6	Magoules F., Roux F.-X., "Lagrangian formulation of domain decomposition methods: A unified theory", Applied Mathematical Modelling, ISSN 0307-904X, Vol. 30, Issue 7, pp. 593-615, 2006, doi:10.1016/j.apm.2005.06.016	1.47934		
7	Magoules F., Ivanyi P., Topping B.H.V., "Convergence analysis of Schwarz methods without overlap for the Helmholtz equation", Computers & Structures, ISSN 0045-7949, Vol. 82, Issue 22, pp. 1835-1847, doi:10.1016/j.compstruc.2004.02.025	2.52355		
8	Chevalier P., Nataf F., "An optimized order 2 (OO2) method for the Helmholtz equation", Comptes Rendus de l'Academie des Sciences – Series I – Mathematics, ISSN 1631-073X, Vol. 326, Issue 6, pp. 769-774, 1998, doi:10.1016/S0764-4442(98)80047-5	0.74501		
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<b>Susan-Resiga R.F., Vu T.C., Muntean S., Ciocan G.D., Nennemann B., "Jet Control of the Draft Tube Vortex Rope in Francis Turbines</b>		<b>2.734715</b>	<b>5</b>	<b>0.5469431</b>
1	Cai Q.-D., "Lattice Boltzmann simulation of flows in bifurcate channel at rotating inflow boundary conditions and resulted different outflow fluxes", Acta Mechanica Sinica, ISSN 0567-7718, Vol. 27, Issue 4, pp. 510-518, 2011, DOI 10.1007/s10409-011-0466-4	0.74355		

2	Casanova F., "Failure analysis of the draft tube connecting bolts of a Francis-type hydroelectric power plant", Engineering Failure Analysis, ISSN 1350-6307, Vol. 16, Issue 7, pp. 2202-2208, 2009, doi:10.1016/j.engfailanal.2009.03.003	1.12015		
3	Qian Z.D., Zheng B., Xuai W.X., Lee Y.H., "Analysis of pressure oscillations in a Francis hydraulic turbine with misaligned guide vanes", Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, ISSN 0957-6509, Vol. 224, No. 1, pp. 139-152, 2010, doi: 10.1243/09576509JPE736	0.87102		
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<b>Susan-Resiga R.F., "Attenuator's Volume Influence on High Pressure's Pulsations in a Jet Cutting Unit", Proceedings of the 11th</b>		<b>0.417973</b>		<b>1</b>
1	Fabien B.C., Ramulu M., Tremblay M., "Mathematical Modelling and Identification of a Waterjet Cutting System", Mathematical and Computer Modelling of Dynamical Systems, ISSN 1387-3954, Vol. 9, No. 1, pp. 45-63, 2003, DOI: 10.1076/mcmd.9.1.45.16513	0.41797		
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<b>TOTAL:</b>	<b>C</b>
	<b>16.82092</b>