

CONTRACTOR

Institute of Mathematical Statistics and Applied Mathematics "Gh.Mihoc-Caius Jacob "GEORGE MIHOC-Caius Jacob" BUCHAREST

Annex IIa / to contract funding'llhas
no. 152/2007, Act Ad. 2 / 2008**DIRECTORY**

Acad Iosifescu Marius

Program:	IDEAS
Type Project	Projects Exploratory research
Code Project:	ID_880

Plan to achieve PROJECT**Name Project: Modeling of stall delay due to rotation**

-Frame structure

Year	Stage	Objectives	Activities	Budget Categories	Necessary financial resources (Value RON)	Within settlement	Results delivered on stage
2007	Single	1. Topology of vortex structures for dimensional separation	1.1. - Asymptotic analysis around critical points specific separation: node, focus.	-Costs staff	→ 3000	15.dec.2007	-1 article indexed journal database -1 technical article - scientific report
			1.2. - Defining streamlines on the wall and the characteristic lines for hyperbolic type differential equations	-Costs indirect	→ 240		
			1.3. - Types of streamlines spectra on the wall in 3-D separation.	Logistics-costs (computer peripherals)	→ 1760		
			Total stage		5000		

Year	Stage	Objectives	Activities	Budget Categories ¹	Necessary financial resources (Value RON)	Within settlement ²	Results delivered on stage
2008	Final	1. A 3-D model quasi Navier-Stokes for a rotating aerodynamic profile.	1.1. - Mathematical quasi 3-D model formulation	-Costs staff	→ 33330	15.Iul.2008	-Scientific report Computer-program -1 article indexed journal database -1 Technical journal articles / presentations to conference
			1.2. - Computer software development	-Costs indirect	→ 2670		
			1.3. - Development of a semi-empirical model design for aerodynamic characteristics of a rotating profile.	-Mobility (stages documentary)	→ 20941		
				Logistics-costs (PC)	→ 443		
	Total phase 2					57384	
2009	Intermediate	1. A formulation of a 3-D boundary-layer equations on the rotating blade	1.1. - Mathematical formulation of a 3-D boundary layer on a rotating blade	-Costs staff	→ 38670	15.Ian .. 2009	-
			1.2. - Numerical solution and analysis of the influence of second-order terms (Centrifugal and Coriolis acceleration) on the main flow of profile	-Costs indirect	→ 3090		
				-Mobility (stages Documentary)	→ 7059		
			1.3. - Comparison with numerical results of Navier-Stokes model.	-Costs Logistics (laptop, software, technical documentation)	→ 13797		
	Total stage 3					62616	

Year	Stage	Objectives	Activities	Budget Categories ¹	Necessary financial resources (Value RON)	Within settlement ²	Results delivered on stage
2009	Final	2. Rotational effect on the behaviour of boundary-layer and on the flow field structure, using viscous-inviscid interaction methods.	2.1. - Expansion of a viscous-inviscid interaction method from 2D profiles to the three-dimensional rotating case.	-Costs staff	→ 72000	15.nov.2009	-Scientific report Computer-program -1 article indexed journal database -1 technical article / presentation to conference -Scientific report
			2.2. - Developing a simplified model in the case of a frictionless flow after separation.	-Costs indirect	→ 5760		
			2.3 - Comparison of results of two methods	-Mobility (stages Documentary-R)	→ 28000		
			2.4. - identification of vortex structures responsible for increased of aerodynamic on the rotating blades.	-Costs logistics (PC peripherals, digital projector, consumables, technical documentation).	→ 14240		
			2.5-developing corrections for the effect of rotation on the aerodynamic characteristics of profile (C_L - C_D).				
			2.6. - application of correction formulas for calculating power characteristics.				
			Total phase 4		120000		

Year	Stage	Objectives	Activities	Budget Categories ¹	Necessary financial resources	Within settlement ²	Results delivered on stage
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					(Value RON)		
2010	Single	1. Implementation of stall delay model in a: blade-element momentum (BEM) design method.	1.1. – Development program BEM calculation for the proposed BEM model	-Costs staff	→ 33000	30.sept.2010	-1 ISI journal article Technical -1 article indexed in database - Computer program - Scientific report
			1.2 - Checking with other existing models	-Costs indirect	→ 2640		
			1.3. – tests with experimental data Prompter and field	-Mobility (Documentation - Research stages)	→ 15000		
				-Costs of logistics (PC peripherals , technical documentation, consumables)	→ 4360		
				Total stage 5	55000		

Director ,
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Responsable
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Us liable for the accuracy of data submitted.