Studi Numerik 2-D Perpindahan Panas Aliran Crossflow Pada Silinder Sirkular Tunggal Dan Tandem Dengan Modifikasi Turbulent Viscosity

Title	Studi Numerik 2-D Perpindahan Panas Aliran Crossflow Pada Silinder Sirkular Tunggal Dan Tandem Dengan Modifikasi Turbulent Viscosity
Author Order	1 of 1
Accreditation	
Abstract	The Ã,Â crossflow in cylinder marked by the phenomenon of stagnation point, shear layer separation and wake formation. Characteristics of flow regimes can be unsteady laminar flow (the formation of vortex shedding regime), transitional (regime with the transition to turbulent flow pattern in the wake area) and sub-critical (regime formation of the turbulent on shear layer). The value of the Reynolds number is very influential on the flow regimes characteristics of the flow, while the heat transfer process is heavily influenced by the value of Prandtl number. The amount of heat transfer is indicated by the parameter of Ã,Â Nusselt number. This study uses a numerical study by modifying the quantity of turbulent, ie the turbulent viscosity by interpreting UDF (user defined function). The results of numerical studies in the form of Nusselt number will be compared with the value of Nusselt number of experimental results and to create a basis consept for studying the mechanism of the flow phenomenon and Ã,Â heat transfer in the heat exchanger tube banks. The method used is a steady and unsteady 2-DRANS (Reynolds-averaged Navier Stokes) numerical simulations with 3 modeling, namely the standard k-Ã'Â", standard k-Ã•Â‰ and SST k-Ã•Â‰ turbulence models.Ã,Â
Publisher Name	Universitas Islam Bandung
Publish Date	2017-01-29
Publish Year	2017
Doi	DOI: 10.29313/ethos.v0i0.2238
Citation	
Source	ETHOS (Jurnal Penelitian dan Pengabdian)
Source Issue	Vol 5 No.1 (Januari, 2017) Ethos: Jurnal Penelitian dan Pengabdian (Sains & Teknologi)
Source Page	82-90
Url	https://ejournal.unisba.ac.id/index.php/ethos/article/view/2238/pdf
Author	ARIF KURNIAWAN, M.Kes