

Документ подписан простой электронной подписью

Информация о владельце:

ФИО: Верисокин Александр Евгеньевич

Должность: И.о. декана факультета нефтегазовой инженерии

Дата подписания: 06.05.2014 13:09:48

Университет программный ключ:

id: 41668683235300c43cb766109c6eb185a1d00

Annotation to the work program of the discipline

Name of the discipline	Термодинамика и теплотехника / Thermodynamics and Heat Engineering
Summary	Technical thermodynamics: Thermodynamic parameters. Thermodynamic processes and cycles. Laws of ideal gases. Flow thermodynamics. Real gases: Van der Waals equation. vaporization processes. Water vapor. Tables and diagrams of water vapor used for practical calculations. Refrigerants, thermodynamic and physical properties of refrigerants, i-lgP-diagram. Cycles: Ideal cycles for single stage reciprocating compressors. Ideal Cycles multistage reciprocating compressors. Cycles of reciprocating internal combustion engines and steam power plants. Cycles of gas turbine, refrigeration units and thermotransformers. Heat and mass transfer: Fundamentals of heat and mass transfer. Thermal conductivity. convective heat transfer. Radiant heat exchange. Heat transfer. Calculations of heat exchangers. Heat engineering: fuel; fundamentals of the theory of combustion; fundamentals of energy supply; renewable sources energy; industrial boiler plants.
results development disciplines (module)	knows the fundamental features of modeling mathematical, physical and chemical processes, designed for specific technological processes;
Labor intensity, cu	3
Reporting Forms (including by semesters)	Graded (grading)
List of basic and additional literature required to master the discipline	
Main literature	Arutyunov V.A., Krupennikov S.A., Sborshchikov G.S. Thermal physics and heat engineering: course lectures. MISIS, 2010, 228 p. Available: http://e.labbook.ru
Additional literature	1. Heat engineering: Proc. for universities / V.N. Lukanin, M.G. Shatrov, G.M. Kamfer and others; Under the editorship of V.N. Lukanin. - M. Higher School, 2006. - 671 p. 2. Kudinov V.A., Kartashov E.M. Technical thermodynamics. Textbook for higher educational institutions. - M.: Higher. school, 2006. - 261 p.
	3. Collection of problems on technical thermodynamics / T.N. Andrianova, B.V. Dzampov, V.N. Zubarev and others - 4th ed., revised. and additional - M.: MEI Publishing House, 2000. - 356 p. 4. Heat engineering / Ed. Krutova V.I. - M., Mashinostroyeniye.1986. Pankratov G.P. Collection of problems in heat engineering: Textbook. M.: Higher school, 1995. - 218 p.