

# 두산중공업

## 2015 R&D 부문

### 해외 우수인재 채용

2015. 03. 02(월) ~ 04. 15(수)

**모집전공** - 기계 (구조 / 진동 / 소음 / 열 / 유체 / 연소)  
- 계측제어 (I&C)  
- 소재

**지원자격** - 박사 학위 취득예정자 (15년 혹은 16년 초) 및 기 취득자 (Post-Doc 가능)  
- 남자의 경우 병역을 필 하였거나 면제된 자  
- 해외여행 또는 해외근무에 결격사유가 없는 자

**근무지역** - 창원  
- 수지

**선발분야** - 기계 Mechanical Engineering  
- 전기전자 Electrical Engineering  
- 소재 Material Engineering  
- 화공 Chemical Engineering  
- 가스터빈 기술 Gas Turbine Technology

**접수기간** - 2015. 03. 02(월) ~ 04. 15(수) 24:00 까지 (한국시간)

**접수방법** - 커리어 두산 (<https://career.doosan.com>) 에서  
On line 접수만 가능

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## 세부 모집 분야

### [기계/ Mechanical Engineering]

모집분야	세부분야	연구분야	근무지
Thermal & Fluid	Thermal & Fluid	<ul style="list-style-type: none"> <li>- Supersonic/Subsonic solver development</li> <li>- Design tool-CFD analysis tool integration &amp; automation</li> <li>- Even flow distribution and flow control</li> <li>- Fluid induced vibration analysis</li> </ul>	용인(수지)
	Turbo Machine Flow	<ul style="list-style-type: none"> <li>- Axial turbine design/flow analysis</li> <li>- Multistage flow solver development including wetsteam condensation</li> <li>- Turbulence model development</li> </ul>	
	Multi-phase Flow	<ul style="list-style-type: none"> <li>- 2 phase flow(phase change &amp; mixing) CFD analysis &amp; experiment</li> <li>- Particle generation and behavior CFD analysis &amp; experiment(fouling, particle separation, etc)</li> <li>- Free surface CFD analysis and experiment</li> </ul>	
	Combustion	<ul style="list-style-type: none"> <li>- Coal combustion analysis solver development</li> <li>- Combustion models development (devolatilization, char conversion, gas reaction, etc)</li> <li>- Coal burner combustion CFD analysis</li> <li>- Coal boiler combustion optimization technology</li> </ul>	
	Optimization of Flow Circuit & Heat Transfer Surfaces Arrangement and their Integrity Assessment	<ul style="list-style-type: none"> <li>- Development of design tools for various type heat exchangers (condenser, feedwater heater, moisture separator reheater, HRSG, Gas-Gas heater and etc.)</li> <li>- Analysis for transient heat transfer phenomena</li> <li>- Dynamic simulation to predict the system dynamic behaviors</li> <li>- Assessment of structural integrity, reliability and life cycle of critical components</li> </ul>	
	Heat Transfer Performance Improvement	<ul style="list-style-type: none"> <li>- Optimum design of heat exchangers</li> <li>- Experimental and numerical analysis of heat exchangers</li> <li>- Heat transfer enhancement using super hydrophobic nanostructured surfaces</li> </ul>	
Structure / Vibration	Structural Strength	<ul style="list-style-type: none"> <li>- Structure analysis, reliability analysis</li> <li>- Seismic and impact analysis</li> <li>- Optimum design</li> </ul>	용인(수지)
	Life Assessment	<ul style="list-style-type: none"> <li>- Fatigue analysis and life assessment</li> <li>- Crack propagation analysis, Creep analysis</li> <li>- Fatigue-Creep interaction analysis</li> </ul>	
	Vibration Engineering	<ul style="list-style-type: none"> <li>- Structural vibration analysis/Test technology</li> <li>- Rotor dynamics and tribology</li> <li>- Signal processing/Diagnostic monitoring technology</li> <li>- Flow-induced vibration</li> </ul>	
	Noise Engineering	<ul style="list-style-type: none"> <li>- Noise engineering and noise control</li> <li>- Structure/Aerodynamic noise analysis and test technology</li> </ul>	

## 세부 모집 분야

### [기계/Mechanical Engineering]

모집분야	세부분야	연구분야	근무지
Plant System Engineering	System Performance Analysis	<ul style="list-style-type: none"> <li>- Plant cycle heat balance calculation and optimization technology</li> <li>- Heat transfer and boiler/turbine performance design</li> <li>- Tube inside flow balancing and stability analysis technology</li> </ul>	용인(수지)
	System Dynamic Behavior Analysis	<ul style="list-style-type: none"> <li>- Computer aided dynamic simulation technique for power plant</li> <li>- Boiler/HRSG dynamic analysis and system design technology</li> <li>- Mechanical dynamics (Turbo machinery dynamic analysis, Mechatronics)</li> <li>- Simulator for power plant</li> </ul>	
	Design Tool Development and Automation	<ul style="list-style-type: none"> <li>- Software design &amp; integration, Numerical analysis &amp; algorithm</li> <li>- Database design &amp; data processing</li> <li>- Graphics &amp; data visualization, Application framework</li> </ul>	
	Combustion System Analysis	<ul style="list-style-type: none"> <li>- Combustion model development</li> <li>- Emission(CO, NOx, Soot etc.) estimation technology development</li> <li>- Radiation heat transfer analysis technology development</li> <li>- Combustion CFD analysis technology(Open source using)</li> <li>- Power plant burner/boiler combustion CFD analysis</li> </ul>	
	New Energy System	<ul style="list-style-type: none"> <li>- Process design and optimization</li> <li>- Thermal property, Thermal fluid characteristic research</li> <li>- CAPE(Computer Aided Process Engineering) technology</li> <li>- Supercritical fluid application technology development</li> </ul>	

### [전기전자/Electrical Engineering]

모집분야	세부분야	연구분야	근무지
Control System	Control System Hardware	<ul style="list-style-type: none"> <li>- Control system architecture design</li> <li>- Embedded system hardware/firmware/FPGA design</li> <li>- Industrial wireless, fieldbus communication hardware/firmware design</li> <li>- Inverter design</li> </ul>	용인(수지)
	Control System Software	<ul style="list-style-type: none"> <li>- Control system software and communication protocol design</li> <li>- Device driver design</li> <li>- Engineering tool and database design</li> <li>- Software verification and validation</li> </ul>	
Process Control	Control Algorithm	<ul style="list-style-type: none"> <li>- Power &amp; Desalination plant control algorithm development</li> <li>- Plant dynamic analysis &amp; optimal tuning technology development</li> </ul>	
	Simulation & Optimal Control	<ul style="list-style-type: none"> <li>- Power &amp; Desalination plant simulation &amp; proven technology</li> <li>- Optimal algorithm design using modern control theory</li> <li>- Plant operation &amp; reliability improvement technology</li> </ul>	

## 세부 모집 분야

### [소재/ Material Engineering]

모집분야	세부분야	연구분야	근무지
Material Science & Engineering	Structural Material	<ul style="list-style-type: none"> <li>- Alloy design of steel(ferritic, martensitic, austenitic) &amp; development</li> <li>- Alloy design(Simulation) of non-ferrous alloy(Ni &amp; Co-based superalloy, Ti alloy) &amp; development</li> <li>- High temperature material for steam/gas turbine/boiler application</li> <li>- Hot stamping/Mold steel &amp; Roll material</li> <li>- Plant &amp; Nuclear material</li> </ul>	창원
	Material Evaluation & Life Assessment	<ul style="list-style-type: none"> <li>- Mechanical property/Evaluation of ferrous &amp; non-ferrous alloy</li> <li>- Corrosion/Oxidation/Chemical metallurgy/Diffusion</li> <li>- Fatigue, Creep, Creep-Fatigue evaluation/Fracture mechanics</li> <li>- Welding metallurgy/Simulation of welding</li> <li>- Material evaluation/Life assessment of ferrous &amp; non-ferrous alloy</li> <li>- Phase transformation/Metallography/Crystallography</li> <li>- Physical metallurgy</li> </ul>	
	Metal Process Engineering	<ul style="list-style-type: none"> <li>- Metal forming &amp; Process, Simulation</li> <li>- Precision forging &amp; Open die/Closed forging of metal</li> <li>- Investment casting of Ni- &amp; Co-based superalloy for GT blade/vane</li> <li>- Ingot making process(ESR, VAR, VIM) &amp; simulation</li> </ul>	
Advanced Process Development	Surface Treatment	<ul style="list-style-type: none"> <li>- New process development of thermal barrier coatings</li> <li>- Surface treatment and coating powder materials development</li> <li>- Optimized coating technology</li> <li>- Metallurgical characteristics and reliability assessment techniques</li> </ul>	창원
	Welding Joining	<ul style="list-style-type: none"> <li>- Repair welding &amp; joining technology of super heat resisting alloys</li> <li>- High alloys welding metallurgy, material test &amp; evaluation</li> <li>- Joining material development of brazing &amp; diffusion process</li> <li>- Defect analysis and evaluation of dissimilar welding</li> </ul>	
	Structural Integrity Evaluation	<ul style="list-style-type: none"> <li>- Flaw growth analysis &amp; structural integrity evaluation</li> <li>- Evaluation of thermal, mechanical and welding residual stresses using computer aided numerical method</li> <li>- Fracture mechanical evaluation of cracked structures, pipes &amp; vessels</li> </ul>	

## 세부 모집 분야

### [화공/Chemical Engineering]

모집분야	세부분야	연구분야	근무지
Water R&D	Desalination	- Advanced desalination technologies (Electrochemical tech., Noble membrane application, Energy consumption optimization, etc.)	용인(수지)
	Wastewater Treatment	- Anaerobic digestion technology (Pretreatment, Biogas production, Wastewater treatment technology after dewatering and drying, etc.) - Industrial wastewater treatment (Process engineering, Absorption/ Separation technology) - Advanced wastewater treatment technology (Electrochemical tech.)	
	Water System Hybridization for Low energy Consumption	- Water system integration with renewable energy - Water process optimization for low energy consumption - New process development applied with electrochemistry, osmotic technology, etc	

### [가스터빈 기술/Gas Turbine Technology]

모집분야	세부분야	연구분야	근무지
Gas Turbine Development	System Integration	- Turbomachinery rotor integration design - Turbomachinery layout/platform design - Mechanical design (Pipe, Valves, Pedestal, etc) - Turbomachinery rotordynamics analysis	창원
	Compressor	- Axial compressor aerodynamic design - Turbomachinery aeromechanic design - Turbomachinery mechanical design & safety evaluation - Compress Performance/aeromechanic test	
	Combustor	- Combustor mechanical design - Combustor heat transfer analysis/Cooling Design	
	Turbine	- Axial turbine aero-thermal design - Heat transfer analysis / cooling passage design - Cooled blade/vane heat transfer test	