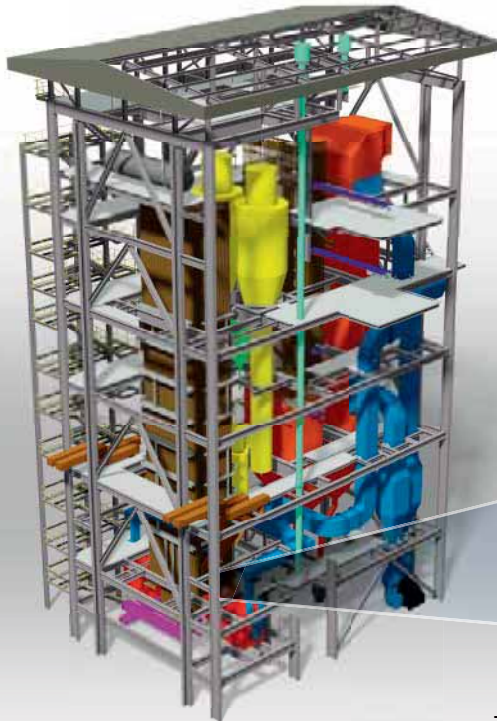
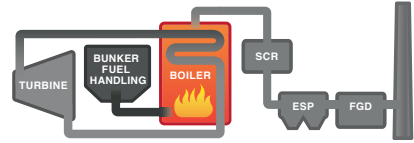
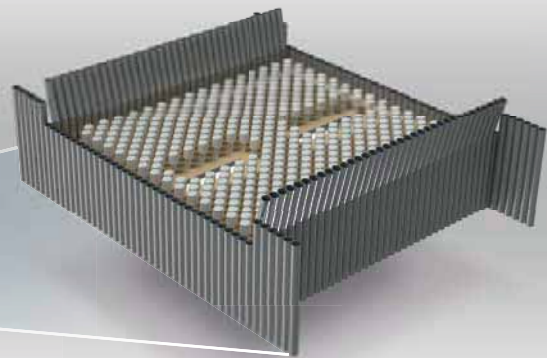


# Circulating Fluidized Bed Boiler



## Air Distribution Nozzle Plate Arrangement



Tailor Made Design  
High Efficiency  
Wide Fuel Range

Application	Boiler Type	Scope of Supply
<b>Power Plants and Industrial Boilers</b> Circulating fluidized bed boiler with direct desulfurization  <b>Benefits</b> <ul style="list-style-type: none"> <li>• Tailor made design to meet customer specific requests and space limitations</li> <li>• Sub- and super-critical boiler design with and without reheater</li> <li>• Advanced nozzle cap design for optimized fluidization</li> <li>• Refractory protection for critical zones in furnace</li> <li>• Cyclone configuration for optimal arrangement of plant components</li> <li>• Convective pass with low erosion design</li> </ul>	<ul style="list-style-type: none"> <li>• Natural circulation</li> <li>• Once through</li> </ul>	<ul style="list-style-type: none"> <li>• Consultancy</li> <li>• Sophisticated calculation tools for flow and heat transfer</li> <li>• Engineering from concept to detail</li> <li>• Supply of core components</li> <li>• Site supervision and commissioning</li> </ul>
	<b>Fuel Type</b> <ul style="list-style-type: none"> <li>• Lignite</li> <li>• Bituminous coal</li> <li>• Biomass</li> <li>• Waste fuels</li> <li>• Pre-dried lignite</li> <li>• Co-firing of various fuel types</li> </ul>	

Reference List Excerpt

## Circulating Fluidized Bed Boiler Technology

Scope	Client
Layout and basic engineering for heat and power CFB steam generator, 90 t/h, Lignite, Tabor PS, Czech Republic	CKD Praha DIZ a.s., Praha, Czech Republic
Basic design review CFB boiler, 330 MWel, Lignite, Stanari PS, Bosnia & Herzegovina	EFT Group, Belgrade, Serbia
Basic design engineering for a process steam CFBC boiler, 35 t/h, Bituminous Coal, new-built plant, Vietnam	Martech Boiler Company, Ho Chi Minh City, Vietnam
Basic and partial detail design for 2x270 MWel CFBC boilers, Becl PS, India	AE&E Lentjes GmbH, Ratingen, Germany
Engineering for CFB Boiler, Low Rank Coal, 2x80 t/h, Indonesia	PT. ZUG Industrie Indonesia, Jakarta, Indonesia
Study for CFB operation boiler 6, comparison of operation values with initial design parameters, Pre-Dried Lignite, 248 MWth, Merkenich PS, Germany	RheinEnergie AG, Cologne, Germany
Know-how transfer and training in the design of CFBC boilers, Eskom Enterprises, South Africa	Eskom Enterprises, Johannesburg, South Africa
Consultancy and supervision services – Owner’s engineer for the construction of the 330 MWel lignite-fired thermal power plant Stanari, Bosnia & Herzegovina	EFT – Rudnik i Termoelektrana Stanari d.o.o., Belgrade, Serbia
Know-how transfer and technical training for circulating fluidized bed boilers (CFB), Indonesia	PT. ZUG Industrie Indonesia, Jakarta, Indonesia
Know-how transfer – Engineering for circulating fluidized bed (CFB) boiler technology	PJSC EMAlliance, Taganrog, Russian Federation
Pressure part layout and design for CFB steam generators, 2x250 MWel, Lignite, Neyveli PS, India	AE&E Lentjes GmbH, Ratingen, Germany
CFBC Market study	Babcock-Hitachi Europe, Oberhausen, Germany

**Legend:**

PS – Power Station  
PF – Pulverized Fuel  
CHP – Heat and power plant

SCR – Selective Catalytic Reduction  
STP – Standard Temperature and Pressure  
HRSG – Heat Recovery Steam Generator

FGD – Flue Gas Desulphurization  
CFB – Circulating Fluidized Bed  
ESP – Electrostatic Precipitator

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