

2017 -	<b>Valmet Technologies Oy</b> Russia	Owner Engineer Site Manager services for new power boiler construction in Segezha(T)
2016- Continue	<b>Sarens / MWaves Ltd</b> Finland	Site observation services for port upgrade construction project in Hamina, Finland
2016- Continue	<b>AF Consults Oy</b> Indonesia	PT Prima Layanan Nasional Enjiniring Mechanical Design Review services (T)
2016- Continue	<b>Wärtsilä Oyj</b> Finland	NPP Safety Diesel documentation review and advisory (T)
2016- Continue	<b>AF Consults Oy</b> Philippines	Sarangani, Southern Mindanao Phase 2, Philippines Owner Engineer Site Manager services
2016- Continue	<b>DEKRA Oy</b> Finland	Quality Control services for Olkiluoto 3 NPP project commissioning (T)
2016- Continue	<b>Valmet Technologies Oy</b> Finland and Russia	Document management and translations for power boiler project in North Russia (T)
2016- Continue	<b>Teollisuuden Voima Oy</b> Finland	System Commissioning Engineer for Olkiluoto 3 NPP project (T)
2016- Continue	<b>Valmet Technologies Oy</b> Denmark, Finland	Project engineer for power boiler plant steel structure in denmark and Finland. (T)
2016-2017	<b>Valmet Technologies Oy</b> Czech Republic	Controller of workshop manufacturing of boiler house frame in Vitkovice, Ostrava, Czech. The scope included 2500 tons steel structures to site in Naantali, Finland.(T)
2014-2015	<b>Fennovoima Oy</b> Finland	Consultant services for Hanhikivi 1 Nuclear Power plant project (T) <ul style="list-style-type: none"> <li>• Nuclear Engineering</li> <li>• Design review of documentation for Reactor area.</li> <li>• Construction license application for Hanhikivi-1. Main responsibilities within component documentation requirements.</li> <li>• Preparing documentation for construction license application. Coordinating and scheduling of document preparation for PSAR (Probabilistic Safety Assessment Report) and communication between supplier, owner and authorities.</li> </ul>
2014-2016	<b>AF-Consults Oy</b> Indonesia	Tajun Jati B 2 x 660 MW Power Plant, Jepara, Indonesia. Commissioning, operation and maintenance management (TP)
2014-2015	<b>Valmet Technologies Oy</b> Sweden	Södra Pulp mill extension at Varberg, Sweden. Workshop control in Lithuania and structural supervision at site. (T)
2014- Continue	<b>PT Bekasi Power</b> Indonesia	Plant Management and energy technologies and engineering services for Jababeka Project Jakarta, Indonesia (T) <ul style="list-style-type: none"> <li>• Conceptual design</li> <li>• Pre-engineering services</li> <li>• Design implementation services (like process. lay-out, civil, piping, electrification, automation, HVAC)</li> <li>• Efficiency improvements</li> </ul>

		<ul style="list-style-type: none"> <li>• QA/QC reviews</li> <li>• EPCM services</li> <li>• Different inspections</li> <li>• Troubleshooting</li> <li>• Training</li> </ul>
2014	<b>Valmet Energy Oy</b> Hungary/Romania	<p>Dunauham Power Plant , Valmet Energy Oy project, Hungary.</p> <ul style="list-style-type: none"> <li>• Controll of boiler house frame workshop manufacturing in Energo Brasov, Romania. 1300 tons steel structures sent to site in Dunaujvaros, Hungary. (T)</li> </ul>
2014-Continue	<b>Agon Pacific CO. Ltd</b> Philippines	<p>Sarangani, Southern Mindanao, Philippines</p> <ul style="list-style-type: none"> <li>• Construction and commissioning management</li> </ul>
2013-2015	<b>Fortum Oyj,</b> Loviisa	<p>Technical studies of feed water-, main condenser and cooling water systems aiming to retrofit the pumping systems</p>
2015	<b>Andritz Oy</b> Portugal	<p>Portugal Cacia Power Plant Commissioning of deodorization plant.</p>
2014-2015	<b>Valmet Power Oy</b> <b>Baltic countries</b>	<p>Supervision of Manufacturing in Baltic countries. Major part in Lithuania but also supplier sub-contractors in Latvia. Scope includes Progress follow-up, Progress meetings, Quality monitoring, Design coordination (facades), Troubleshooting, Reporting, Claiming, Scheduling etc.(T)</p>
2013-2014	<b>PT Cikarang Listrindo</b> Indonesia	<p>Lippo Cikarang, Bekasi, Indonesia</p> <p>Senior consultant services in the preparation of basic engineering design, capacity calculations, process flow diagrams, equipment layout, Tender documents preparation, evaluation of tenders and assist the management for the ordering process for</p> <ul style="list-style-type: none"> <li>• 800 t/h barge unloaders, 800 t/h conveyors system, coal vibro screens, crushers, 800 t/h two stacker reclaimers etc.</li> <li>• 450t/h capacity limestone handling system comprising of conveyors, vibrating screens, crushers, drying system, storage and transport of treated limestone to the limestone silos at Boiler house.</li> <li>• Atmospheric tanks such as fuel oil storage tank, clarified water buffer tanks, clarified water tank, service water tank, fire water tanks and makeup water tank.</li> <li>• Water treatment plant consisting of river intake facilities, clarifiers, sludge disposal system, clarified water pre-treatment plant, multi-media filters, activated carbon filters, Demin plant.</li> </ul>
2013	<b>Agon Pacific</b> Indonesia	<p>POSCO Engineering EPC project In Merak West Jawa, Indonesia</p> <ul style="list-style-type: none"> <li>• Commissioning of 2x60 MW Coal fired circulating fluidised bed combustion boilers, turbines, water, waste water treatment plant and the auxiliaries. Preparation of procedures for the commissioning activities such as chemical cleaning, steam blow out etc. preparation of spares required for two years operation, and strategic spares requirement for the power plant.</li> </ul>
2011-2012	<b>Andritz Oy</b> China	<p>Quality and expedition inspections in several factories in China e.g: (T)</p> <ul style="list-style-type: none"> <li>• presure part inspection of black liquid boiler in Sichuan CRUN Co. Ltd. and Western Power Industrial Ltd.</li> <li>• hydro testing of the boiler drum in Sichuan CRUN Co. Ltd.</li> <li>• evaporator and condensate tank inspection in Jiangdu Junye Process Equipment Co. Ltd.</li> <li>• pulp drying machine inspection in Andritz Technologies Ltd and Seaflower (Shanghai) Marine Co., Ltd.</li> <li>• chemical plant equipment inspections in Zhuo Qun Nickel Titanium</li> </ul>

		Co., LTD.															
		<ul style="list-style-type: none"> <li>• flowmeter inspection in KROHNE measurement Technology (Shanghai) Co., Ltd.</li> </ul>															
2009-2010	<b>Kuopion Energia Oy</b> HPN3 CHP Plant Finland	<p>The Haapaniemi 3 (HPN3) Power Plant is a biomass fired combined heat and power plant producing 46 MW of electricity and 85 MW of district heat.</p> <p>Owner's engineering services supplied by Tapro included the following tasks (T):</p> <ul style="list-style-type: none"> <li>• evaluation of design of the process systems</li> <li>• evaluation of equipment technical specifications</li> <li>• preparing purchasing proposals for mechanical equipment</li> <li>• making quality and delivery control of mechanical components</li> <li>• 3D implementation design</li> </ul>															
2007-2008	<b>Siemens AG</b> Energy Sector Erlangen	<p>The 1600 MW<sub>e</sub> Olkiluoto 3 Nuclear Power Plant, which is under construction in Finland, includes the first Generation III+ reactor to be built in the world. The advisory services to Siemens Power Generation Division included matters concerning design and quality assurance of high, medium and low pressure piping and associated equipment. (T)</p>															
2007-2008	<b>The City of Tampere</b> Electricity Works Finland	<p>2 x 60 MW<sub>e</sub> peat, wood, fuel oil and natural gas fired Naistenlahti combined heat and power plant. The services included basic and detailed design as well as procurement of fuel handling equipment for increasing wood utilization at the power plant. (TP)</p>															
2008	<b>Stora-Enso Ostro-leka</b> Poland	<p>36 MW<sub>e</sub> biofuel fired power plant. Preliminary plant design of the power plant. (TP)</p>															
2008	<b>UPM Kymmene</b> Caledonia Paper, UK	<p>26 MWe biofuel fired Combined Heat and Power plant. Implementation layout design. (TP)</p>															
2007	<b>Foster Wheeler Energy</b> Sweden	<p>Process and equipment design as well as system descriptions for the 240 MW<sub>t</sub> circulating fluidized-bed (CFB) boiler island to be located at the Igelsta combined heat and power plant in Södertälje, Sweden. (TP)</p>															
2002-2004	<b>Foster Wheeler Energy</b> Ireland	<p>150 MW<sub>e</sub> peat fired extraction condensing power plant owned by West Offaly Power in Shannonbridge, Ireland. Plant implementation engineering included: Coordination of architectural, HVAC, structural and piping design and of PDMS modeling. (TP)</p>															
2002-2003	<b>Foster Wheeler Energy</b> Ireland	<p>100 MW<sub>e</sub> peat-fired extraction condensing power plant owned by Lough Ree Power in Lanesborough, Ireland. Plant implementation engineering consisting of: Coordination of architectural, HVAC, structural and piping design and coordination of PDMS modeling. (TP)</p>															
2001-2005	<b>Foster Wheeler Energy/ Eesti Energia</b> Estonia	<p>The Eesti Power Plant is the world's largest oil shale fired thermal power station consisting of eight power generating blocks 215 MW<sub>e</sub> each. Two of the blocks, Eesti and Balti, were renovated and each of the blocks were equipped with two completely new fluidized bed boilers including Balance of Plant equipment. The main design data of the blocks is as follows:</p> <table border="0"> <tr> <td>Block gross maximum continuous rating (MCR)</td> <td>MW</td> <td>215</td> </tr> <tr> <td>Live steam pressure</td> <td>MPa</td> <td>12,74</td> </tr> <tr> <td>Live steam temperature</td> <td>°C</td> <td>535</td> </tr> <tr> <td>Live steam flow per boiler (MCR)</td> <td>kg/s</td> <td>87,3</td> </tr> <tr> <td>Live steam flow per boiler (BMCR)</td> <td>kg/s</td> <td>90,0</td> </tr> </table>	Block gross maximum continuous rating (MCR)	MW	215	Live steam pressure	MPa	12,74	Live steam temperature	°C	535	Live steam flow per boiler (MCR)	kg/s	87,3	Live steam flow per boiler (BMCR)	kg/s	90,0
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The work included preparation of power plant unit and boiler operation descriptions as well as system descriptions for the following components (TP):

**Eesti and Balti Power Plant Boilers**

- Solid Fuel System
- Bed Material System
- Flue Gas System
- Spring Hammer Cleaning System
- Sonic Clearing System
- Bottom Ash System
- Fly Ash System
- Primary and Secondary Air Systems
- High Pressure Air System
- Start-up Burner System
- Steam Coil Air Heater System
- Boiler Water System
- Superheating and Steam Systems
- Intrex Superheater Systems
- Blow Down Systems
- Boiler Interlocking System

**Eesti and Balti Power Plant Steam Turbines**

- Turbine Extractions Check Valves System
- Cold Reheat Check Valves Control System
- Bypass Line of Cold Reheat Check Valves
- Turbine Flange Heating System
- Ejectors Plant
- Turbine Drain System
- Turbine Gland Steam System
- Jacking Oil System
- Lubrication Oil System
- Hydraulic Governing System
- Condenser Injection System
- LPC Exhaust Cooling System
- Turbine Barring Gear System
- Turbine Control Description
- Start-up Warming Procedure
- Generator Seal Oil System
- Generator Gas Cooling System
- Generator Stator Cooling Water System
- Generator Stator Temperature Monitoring System

**Eesti and Balti Power Plant BoP Equipment**

- Main Condensate
- Low Pressure Preheaters
- Feed Water Tank
- High Pressure Preheaters
- High Pressure Bypass Stations
- Low Pressure Bypass Stations
- Re-heater Safety Valves
- Auxiliary Steam
- Auxiliary and Closed Cooling Water
- Service and Instrument Air
- Boiler Feed Pumps
- Steam Piping and Drains
- Main Cooling Water System

Burghausen, Germany  
120 MW CHP Plant

Services included design, purchasing, installation and commissioning of all Balance of Plant (BoP) systems (gas supply, feed water, condensate, cooling water, steam accumulators, steam networks, make up water and air supply). (T)