Curriculum Vitae

| Name | Norbert Mund |
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Personal Profile

Well experienced freelancer with advanced knowledge in environmental and power plant technology. Distinguished by remarkable reliability and independent working method. Distinct international orientation due to various site engagements as a commissioning engineer all over western europe. Successful in leading positions as well as good in team working.

Professional Experience

| since 10/98 | Self-employed engineer; free-lancing generally in plant engineering and construction (environmental and power plant technology), commissioning prioritised |
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| 08/94 - 12/97 | Company <i>Lentjes Energietechnik GmbH</i> , Essen/Germany; employed as a commissioning engineer |
| 07/93 - 07/94 | Company <i>Prisma Umwelttechnik GmbH</i> , Dinslaken/Germany; employed as a commissioning engineer |
| Academic Education | |
| 03/88 - 04/93 | Studies at the college <i>Fachhochschule Düsseldorf</i> , Germany Course: process engineering Graduation: "Diplom-Ingenieur" (comparable to the Msc) Final grade: "gut" (comparable to B) Thesis: "The operating performance of a coarse-grained activated carbon used for the flue gas treatment of a waste incineration plant" (grade "sehr gut", comparable to A) |
| 10/83 - 10/87 | Studies at the <i>technical university of Dortmund</i> , Germany Course: chemical engineering |
| 08/74 - 06/83 | Natural scientific high school <i>Lise-Meitner-Gymnasium</i> , Düsseldorf/Germany; Graduation: Abitur (comparable to A levels) Final grade: "gut" (comparable to B) |

Advanced Training

| Courses with Certification | Health and safety for executive managers (Safety Certificate Contractors, SCC) |
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| | Expert for gas pressure controllers and measuring units (DVGW, German Technical and Scientific Association for Gas and Water) |

Breathing protection, Breathing apparatus wearer (industrial gas masks, filter units, compressed air breathing apparatus)

| Skills | |
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| Languages | German (native), English (good), French (basic) |
| Computer | MS Office (Word, Excel good) SAP (for maintenance issues) |

Reference Projects

| serial no. period | project description | function / work pattern |
|--|---|---|
| company | | |
| 38 01/23 - ? JFE Standardkessel Baumgarte | EPC Chalampé (F) new waste incineration plant | Commissioning manager for the entire plant. Cold and hot commissioning, optimization. |
| 37 09/22 - 01/23 JFE Standardkessel Baumgarte | Biomass power plant E-WOOD, Doel (B) New biomass-fired power plant (combustion of waste wood) | cold and hot commissioning |
| 36 10/21 - 08/22 EEW Energy from Waste | KVA Buschhaus (D) New sewage sludge incineration plant | Commissioning manager for the entire plant. Cold and hot commissioning, optimization. |
| 35 06/19 - 06/21 EEW Energy from Waste | Kraftwerk Schwedt (D) Existing power plant fired by waste, natural gas and paper sludge | Shift leader and operator for the entire plant. Consultant and supervisor for personnel training. |
| 34 10/18 - 04/19 EnviCon Engineering GmbH | Heizwerk Altchemnitz, Chemnitz (D) modernisation and upgrading of an existing natural gas fired power plant (district heat production) by installing three new fire tube boilers including the associated circulation pump systems and a pressure maintaining system | Commissioning manager for the entire plant. |
| 33 06/18 - 09/18 JFE Standardkessel Baumgarte / Stadtwerke Gießen | TREA II Gießen (D) new waste incineration plant | Supervisor for cold and hot boiler commissioning (flushing, boil out, steam blow). Cold and hot commissioning of the water steam cycle. Consultant for all commissioning issues. Cold commissioning of the waste feed system, the grate, boiler and bottom ash transport systems and the flue gas treatment plant (partially). |

| serial no. | | |
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| period | project description | function / work pattern |
| company | | |
| 32 | KGW 2.0, Kraftwerk Grenzach-Wyhlen (D) | Commissioning manager for the entire plant during cold and hot commissioning |
| 10/17 - 05/18 | | phase, reliability runs and performance |
| E.ON Energy Projects | modernisation and upgrading of an existing natural gas fired power plant by installing a new gas turbine, a new fire tube boiler and a new steam turbine | tests. |
| 31 | Biomass power plant, Widnes (UK) | Shift leader for the entire plant during reliability run and performance test. |
| 07/17 - 08/17 | now biomage fired newer plant (combustion of | reliability full and performance test. |
| JFE Standardkessel Baumgarte | new biomass-fired power plant (combustion of waste wood) | |
| 30 | Environmental Recovery Facility ERF Herefordshire & Worcestershire, Hartlebury (UK) | Shift leader for the entire plant during cold and hot commissioning phase. |
| 07/16 - 04/17 | | Supervisor during reliability run and |
| Hitachi Zosen Inova | new waste incineration plant | performance test. |
| 29 | KVA Renergia Zentralschweiz Perlen, LU (CH) | Commissioning lead engineer for the FGT |
| 07/14 - 10/15 | now wasta incinaration plant (2 lines) | plant. Cold and hot commissioning, optimisation |
| Hitachi Zosen Inova | new waste incineration plant (2 lines) | and reliability run. |
| 28 | Rheinhafen-Dampfkraftwerk Karlsruhe (D) | Operator for the water steam cycle during hot commissioning and reliability run. |
| 01/13 - 05/14 | now hard and find nower plant (1 unit) | not commissioning and reliability run. |
| Alstom Power | new hard coal-fired power plant (1 unit) | |
| 27 09/12 - 12/12 | Finnfjord AS, Finnsnes (N) | Cold and hot commissioning of one line boiler/water/steam. |
| Reining Heisskühlung | Expansion of heat recovery boiler (2 lines) in a melting furnace plant | Plant monitoring and optimisation during reliability run especially concerning the interaction with boiler and turbine. |
| 26 | EVA Höchst, Frankfurt (D) | Cold commissioning of some systems of the plant. |
| 01/10 - 04/12 | new waste incineration plant (3 lines) | Shift leader for the entire plant during cold and hot commissioning phase. |
| EBARA | | Optimisation |
| 25 | HKW Duisburg-Walsum (D) | Shift leader for the entire plant during cold |
| 02/09 - 12/09 Hitachi Power Europe | new hard coal-fired power plant (1 unit) | and hot commissioning phase. |
| 24 | IKW Rüdersdorf (D) | Cold and hot commissioning of the entire FGT including associated attendant facilities. |
| 03/08 - 02/09 | new waste incineration plant | Supervisor for the mentioned plant |
| Fisia-Babcock | | components during reliability run. Optimisation |

| serial no. period company | project description | function / work pattern |
|---|---|---|
| 23 09/07 - 03/08 Fisia-Babcock | CT Alcudia, Mallorca (E) expansion of a flue gas desulphurisation in an hard coal-fired power plant (2 lines) | Cold and hot commissioning of the plant component spray absorber with atomizer and associated attendant facilities. Supervisor for the mentioned plant components during reliability run. Shift leader for the entire plant during hot commissioning and reliability run. Optimisation |
| 22 03/07 - 08/07 Lurgi | SKW Piesteritz, Wittenberg (D) new biodiesel plant | Cold and hot commissioning of the plant component neutralisation/hydro-extraction and associated attendant facilities. Shift leader for the entire plant during hot commissioning and reliability run. Optimisation |
| 21 02/07 - 03/07 Lurgi | EPC Ebeleben (D) new biodiesel plant | Operator for the entire plant during hot commissioning and reliability run. |
| 20 03/06 - 12/06 | EfW Allington, Maidstone (UK) new waste incineration plant (3 lines) | Cold and hot commissioning of the fluidised bed incinerators and all associated attendant facilities. Supervisor for the mentioned plant components during reliability run. |
| 19 11/05 - 03/06 Fisia-Babcock | MVA Wuppertal (D) new incinerator (combustion and boiler) in an existing waste incineration plant | Optimisation Cold commissioning of some systems of the plant. Shift leader for the entire plant during hot commissioning and reliability run. Optimisation |
| 18 05/05 - 10/05 Lab | TREA Leuna (D) new waste incineration plant | Cold and hot commissioning of the entire FGT including associated attendant facilities. Shift leader and supervisor for the mentioned plant components during reliability run. Optimisation |
| 17 03/05 - 04/05 Envirotherm | Kambarka, Udmurtien (RUS) new incineration plant for chemical weapons | Final erection check and cold commissioning of the plant component wet electrostatic precipitator after its pre- erection in Holzgerlingen (D) |
| 16 10/04 - 01/05 Fisia-Babcock | Affaldscenter Aarhus (DK) new waste incineration plant | Cold and hot commissioning of the plant components combustion, boiler and associated attendant facilities. Shift leader for the entire plant during hot commissioning and reliability run. Optimisation |
| 15 01/04 - 09/04 Lurgi Lentjes | SMTB Lacq, Pau (F) new sewage sludge incineration plant | Shift leader for the entire plant during hot commissioning and reliability run. Optimisation. Coordination of the performance test. Handling of snagging items. |

| serial no. | | |
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| period | project description | function / work pattern |
| company | | |
| 14 | ETRSU Meia Serra, Madeira (P) | Shift leader for the entire plant during hot |
| 06/03 - 12/03 | | commissioning and reliability run. Optimisation |
| Lurgi | new waste incineration plant (2 lines) | |
| 13 | Utility Center Maasvlakte, Rotterdam (NL) | Cold commissioning of the entire plant |
| 01/03 - 06/03 Lurgi | new combined cycle power plant (natural gas fired) | except the gas turbine. |
| 12 | FBC Grovehurst, Kemsley (UK) | Shift leader for the entire plant during hot |
| 10/02 - 12/02 | | commissioning and reliability run. Optimisation |
| Lurgi Lentjes | new paper sludge incineration plant | |
| 11 | Wirbelschichtfeuerungsanlage Werdohl- Elverlingsen (D) | Cold and hot commissioning of the entire FGT including associated attendant facilities. |
| 05/02 - 09/02 Bischoff | new sewage sludge incineration plant | Shift leader and supervisor for the mentioned plant components during reliability run. |
| | | Optimisation |
| 10 | WtE Kirklees, Huddersfield (UK) | Cold commissioning of the entire plant. |
| 10/01 - 04/02 Lurgi | new waste incineration plant | Shift leader during hot commissioning and reliability run. |
| Laigi | | Optimisation |
| 9 02/01 - 03/01 | Analysis of the production processes in a coating powder factory, Bensheim and Reutlingen (D) | Consultancy of the departments production planning, engineering and control. |
| Akzo Nobel | | Recording production times, documentation and evaluation. |
| 8 | Klärwerk Paderborn-Sande (D) | Projekt manager |
| 10/00 - 01/01 german service | modification of a sewage sludge drying plant | Design engineering, coordination of erection, commissioning and optimisation |
| 7 05/00 - 10/00 and 06/01 - 09/01 IVAgethen | Stationary and mobile recycling units, Düsseldorf (D) | Commissioning and maintenance of crusher units |
| 6 | Klärwerk Köln-Langel (D) | Projekt manager |
| 10/98 - 04/00 USF Edwards & Jones | Expansion and modification of the mechanical sewage sludge drying plant | Detail engineering, coordination of erection, commissioning and optimisation |
| 5 | AVA Völklingen-Velsen (D) | Commissioning manager for the plant component flue gas denitrification (SCR) |
| 07/97 - 11/97 Lentjes | new waste incineration plant (2 lines) | Cold and hot commissioning, reliability run, optimisation |

| serial no. period company | project description | function / work pattern |
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| 4 01/97 - 06/97 Lentjes | AVG Hamburg (D) new hazardous waste incineration plant | Deputy commissioning manager for the plant component FGT including associated attendant facilities. Cold commissioning of the mentioned components. Shift leader during hot commissioning and reliability run. Optimisation |
| 3 10/96 - 11/96 Lentjes | MVA Wuppertal (D) Modification of the FGT in an existing waste incineration plant | Deputy commissioning manager for the plant component FGT. Coordination and supervision of the modifications. |
| 1 01/96 - 04/96 and 09/96 - 10/96 and 09/97 - 10/97 Lentjes | MVA Düsseldorf-Flingern (D) Modification of the FGT in an existing waste incineration plant (3 lines) | Projekt manager Detail engineering, coordination of the modifications and supervision, commissioning and optimisation |
| 2 08/94 - 01/96 and 05/96 - 08/96 Lentjes | MVA Hamburg-Stellinger Moor (D) Expansion of the FGT in an existing waste incineration plant (2 lines) | Commissioning lead engineer for the plant components FGT and waste water treatment plant. Cold commissioning of the mentioned components and the associated attendant facilities. Shift leader during hot commissioning and reliability run. Optimisation Handling of snagging items |
| 1 07/93 - 07/94 Lentjes | MVA Düsseldorf-Flingern (D) Expansion of the FGT in an existing waste incineration plant (3 lines) | Commissioning manager for the plant component FGT. Cold and hot commissioning, reliability run, optimisation |