Curriculum Vitae
Christian Pallesen

Name:	**Christian Pallesen**
Date of birth:	1965-10-29
LinkedIn:	dk.linkedin.com/in/christianpallesen/
Nationality:	Danish (Danish/EU passport)
Profession:	Engineer, Manager
Residence:	Østre Paradisvej 18C, 2840 Holte; Danmark
Contact Info:	WeChat: ChristianPallesen
	Cell phone: +45 2526 8805
	Mail: christianpallesen0@gmail.com
	Mail: cp@p-engineering.dk
	Web: https://p-engineernig.dk

Education

Graduated as Mechanical Engineer, B.Sc. from the Technical University of Denmark in 1990 (February).
Studenter Eksamen (High School Graduation) from Hasseris Gymnasium, Aalborg in 1984.

Key Qualifications

Experience with multidiscipline engineering and engineering management through 18 years of managing a small engineering company with 7-12 employees in Denmark. The company had a subsidiary engineering office in Mumbai India with local partner. The company was internationally oriented with clients in e.g. USA, Norway, Sweden, Germany, Mauritius and Iran. In this capacity managing task consisted of e.g.

- **Multi Discipline Engineering** covering Electrical, Mechanical, Instrumentation, Structural and Piping
- **3D model based Engineering** with design review – Clash detection, walk troughs
- **Lean Engineering Methodology** – Efficient engineering based on automated engineering processes and standardization and the use of advanced engineering tools based on databases. Enables both lower cost and higher quality at the same time.
- **Change review/handling** based on CCS (Change Control System)
- **Project Management** – Both internally in a team leader capacity and externally in a more commercially capacity – from engineering details to progress and status reports like Manning histograms, Earned Value, S-curves etc.
- **Lean Project Execution Methodology** where focus is on defining decisions and their implication and sort these out up front. Knowingly taking decisions in the right order enables project groups not having to go back and change previous decisions, parameters or prerequisites and thereby omit delays and extra costs.
- **Commissioning and Project Handover** – planning and execution of Functional test, FAT and SAT activities as well as final Project Handover.

Education

Mechanical Engineer, **BSc** from the Technical University of Denmark, Kgs. Lyngby – Class of 1990 (February)

Courses

Various training courses in for example

- COMOS (Aker Solutions),
- AVEVA PDMS (Various training courses 1993-1998),
- PED Directive and relevant norms like AD-2000, EN13445, EN13952, EN13953, EN13480
- Boiler design (BWE / Burmeister & Wain Energy),

- Commissioning (BWE / Burmeister & Wain Energy)
- EUROCODE Structural Design,
- Fire Safety Design
- ATEX Design

throughout my working the years.

Language

- Danish – Native Language
- Swedish – Business Level
- Norwegian – Business Level
- English – Business Level
- German – Basic+
- Spanish – Basic

IT Experience

- **AVEVA PDMS:** Expert/Super User in all modules with expert Levels in e.g., Admin, Programming, Cats&Spec (for all modules), Piping, Equipment, HVAC, Structural and Cable Tray. In total 28 years PDMS of experience.
- **COMOS:** Super User
- **ROHR2:** Super User (pipe flexibility program)
- **CAESAR:** General User (pipe flexibility program)
- **CONVAL**: Super User (Control and Safety Relief Valve calculation/selection program)
- **PIPE-FLO:** Super User
- **ANSYS CFD:** General User
- **MS Office programs:** Super User
- **DXT EN13480** Super User
- **DXT EN13445** Super User
- **MS Project:** Super User
- **Databases** Super user (MS Access/Desktop databases and Enterprise Level)
- **Programming:** Super User @ SQL-databases) + Basic User @ Visual Basic
- **Naviswork Manager** Super User
- **CCS** Experienced User
- **Proark** Experienced User
- **SmartPlant Electrical** Advanced User

Employment Record

2021 **P-Engineering (https://p-engineering.dk)**
Manager

Consulting within Engineering and Design of Building Utilities, Pharmaceutical and Biotech, Waste and Sludge Incineration, Chemical etc.

2019-2021 **NCC Danmark A/S (www.ncc.dk)**
Competence Chief within the Purchase Department

My title does not really cover the basics of the work. I worked with transformation of NCC project execution from based on using subcontractors to handling detail engineering and construction to finalize detail engineering within NCC and base construction on more prefabricated items. A Lean Engineering approach is the main vehicle for this transformation. The overall Goal is to reduce execution time with 8 months. For the DFDS Head Quarters I'm currently handling engineering (from conceptual, basic to detail design), purchasing and construction for the following areas:

- Electrical – Emergency generator/system, UPS-system for Office and BMS network, Solar Panels, General Distribution, PDB & MCC designs etc.
- Equi-Potential Bondage system – Installation and Civil Engineering
- BMS – Control System: Overall architecture, Functional descriptions, etc.
- Water System – with 5 different water qualities.
- Sewage System – Normal Sewage, Rainwater, Fat Sewage, Biowaste and Oil polluted Sewage.
- Drain System – Collection system for drain from fan coils etc.
- Access Ways – all door solutions electrically with door blade
- Lifts – HC lifts, furniture lifts etc.
- Industrial Kitchen – Engineering, procurement of machinery and installations.
- Ventilation – Smoke, Comfort and Process (e.g., Kitchen) with design of ducting system, inlet armature distribution and displacement ventilation nozzles. Procurement of AHU, Damper (control, fire, smoke and smoke control dampers)
- Instrumentation – Control Valves, Instrumentation (process and building automation).
- Heating System
- Cooling System (Normal and Emergency Cooling)
- Safety Systems (Access Control, Intrusion Detection and CCTV)
- Network Installations – Wired and Wifi for Both Security Network and BMS installation.
- Steel Structures – Shafts with platforms
- Steel Structures – Support for Technical Installations including Solar Panels on the Roof.
- Trolley Design – Electrical Trolley for Washing of Solar Panels (Mechanical and Electrical Design)

NCC is the largest Contracting Company in Denmark.

2018 -2019 **Rambøll Danmark A/S (www.ramboll.dk)**
Chief Consultant, Building Utilities

- BIM (Building Information Modelling) Development Responsible for Mechanical Installations – Applicable in general and for Revit.
- Training – Developing training programs for the Building Utilities Area
- Standardization Development Responsible for PID, Hook-up, Pipe Series, Insulation Series, Surface Treating Series, Building Utilities.
- Building Utilities Designs for "Start-up City" (Private Developer) and "Redmolen" (Zubling project)

Rambøll is the largest Danish Consulting Engineers Company with approximately 16.000 employees.

2018 - 2018 **JENA Bio Projects A/S;**
Senior Project Engineer

Engineering of factory for Extracting Wax from Straw with all Process Steps from Straw Reception and Handling to final packaging of final product as granulate.

- Piping
- Structural Steel,
- Civil – Concrete for Tilt-up Erection, Hollow Slab Floors and Roofs.
- Instrumentation,
- Control System,
- Process Design,
- Fire Safety and ATEX design
- Rotating Equipment – Pumps, Decanters, Centrifuges, Fans, Straw Cutting and Screeding, Cranes etc.
- Static Equipment – Tanks, Vessels, Heat Exchangers, Holding Cells etc.

JENA was a Start-up Biotech Company within utilizing Straw for e.g. Wax production. Company is not operative at this moment.

2017 - 2018 **EKAS A/S (www.ekas.dk);**
Engineer, Building Utilities

- Water Installations
- Sewage Installation

EKAS is a Consulting Engineering Company.

2016 - 2017 **WicotecKirkebjerg A/S (www.wk.dk)**
Head of Industrial Section (Main role)

- Construction Management
- Engineering Management
- Project Execution Management

WicotecKirkebjerg is a major Building Utility Contractor in Denmark. In the period of my employment the department handled the following projects:

- Utilities facilities for pharmaceutical plant; Heating, Steam and Water
- Sewage facilities for pharmaceutical plant: General Sewage, Neutralization and Kill
- Sewage facilities for pharmaceutical plant: Neutralization
- Cooling Plant for Herlev Hospital: all aspect from production to distribution.

1998 - 2016 **PlantWare A/S;**
CEO (Main Role); but doing a lot of different tasks as well:

- Plant Design Specialist
- PDMS Administrator
- PDMS Development & Programming
- Pipe Design Specialist
- Structural Steel Design Specialist.
- Platform & Access Stairs and Ladders Design Specialist.

- SQL – Programming
- Visual Basic Programming
- Process Specialist – Pharma, Oil & Gas, Chemicals etc.

PlantWare is a Contracting and Engineering Consulting Company within Process Industry. The Company did project in Denmark, Sweden, Norway, Mauritius, Germany, USA, UK, Bangladesh, Iran, Oman, and UAE. The company had a subsidiary in India representatives in Iran, Oman, and UAE (Abu Dhabi) and used engineering outsourcing in Mauritius, India and Slovakia.

PlantWare was my own company, which I closed in 2016.

1993 - 1998 **Burmeister & Wain Energi A/S;**

- Specialist Engineer
- Project Manager
- Space Manager
- Sound & Vibration Specialist
- Plant Design Specialist,
- Standardization specialist etc.
- Project Start-up Manager – handled all new order start-up through a period of 3 years – a intensive 3–6-week campaign.

Burmeister and Wain is a Main Contractor of Power and Waste Incineration Plants

1991 - 1992 **LK A/S (Now Schneider Electric);**
Development Engineering

- Ejection Molded Electric Switch Boards
- Ejection Molded Metering Boards

LK is a major supplier of Electrical Switchgear – now a part of the Schneider Group.

1990 - 1991 **Lydteknisk Institut APV (Instituten for Sound & Vibration);**
Specialist Engineer Sound and Vibration

- External Noise measurement and calculations
- Machinery Noise – measurement and reduction
- Modal analysis for e.g., Cars and other Machinery

Lydteknisk Institut is a consulting company within Sound & Vibration now a part of Delta Acoustics and Vibration.

1990 - 1990 **F.L. Smidth A/S;**
I held two off different positions at FLS:

- Structural Design Engineer
- Software Development for
    - Sizing of Raw Material Storage Equipment
    - Flow Induced Vibration (Vortex) of Steel Stacks.

FL Smith is Main Contractor within Cement Industry Factories.

Work Experience

Engineering wise:

- **Piping** — Layout & routing, Pipe flexibility, Pipe support design, Detail calculations (Nozzles, Tees, Reducers etc) for high pressure systems. Design according to EN/PED (EN13480 & EN12953)), ANSI/ASME/API (ASME B31.3) and GL-rules.
- **PED** — Pressure Directive Compliance and Pressure Equipment for both Heated Boilers, Fired Boilers, Piping and Pressure Vessels. Experience with e.g., Super Critical Processes up to 600 barg @ 600°C
- **Static Equipment** — Experience with
  - Tanks and Vessels – Pressurized and Pressure less (Pressure/Vacuum controlled)
  - Heat Exchangers (Plate and Shell-tube type)
  - Cyclones and Other Separators
  - Distillation Columns
  - Steam Boilers
  - Heating Boilers
  - Autoclaves
  - Fluid-bed Dryers, spray dryers (partly rotating).
- **Rotating Equipment** — Experience with
  - Axial Flow Fans with up to 8MW @ 10kV motors.
  - Centrifugal fans up to 1MW @ 690V motors
  - Blowers for up to 2 barg air supply
  - Turbines Gas – both Equipment Purchase and, Correct Built-in Conditions around Diffuser, Super Charging System with Air Fogging and Compressing for improving performance in warm weather conditions
  - Turbines Steam – both Equipment Purchase and auxiliary Piping Installation
  - Pumps – from small general fluid pumps to very large Rubber Lined Slurry Pumps for e.g., FGD-plants, High-Pressure Feed Pumps for both Industrial and Utility Steam Boilers
  - Compressors for Air, and Special Pumps like Screw or Membrane Type
  - Screw Conveyers – for various applications like e.g., Slurry, Ash, Sludge etc.
  - Power Generators with Diesel Engines
  - Separators – Oil separators and similar applications.
  - Combustion Engines with Gear Boxes etc. – Ship motors

  For Electrical Motor Driven Rotating Equipment I have Experience with investigation into 2-phase Short Circuit, Island Operation and, Reactivation in Reverse Phase – all for determine of Maximum Moment Shaft and Mass-Inertia adjustment.
- **Instrumentation** — Control valve (sizing & selection), Safety Relief Valves (sizing & selection, Instrumentation/measuring technology
  - Pressure (Absolute, Relative or Differential.)
  - Temperature

- Flow & Mass Flow
- Gas Detect (CH, CO, CO2 etc.)
- Weight
- Analysers (pH, Cl, O2, Turbidity, Conductivity)
- Level (Radar, Ultrasonic, Capacitance)
- Control Valve Selection (Steam, Water, Oil etc.)

All above with Coordination with Control system, and generating of Loop diagrams, Interlock Schemas, Hook-up Schemas

- **Platforms, ASL** — Access platforms, Gangways, Stairs and Ladders according to EUROCODE and EN14122
- **Ducting** — Air and flue gas ducting. Sizing (manual & CFD model based), detail engineering including design of e.g., reinforcement and buck stay corners, expansion joints design, supports (static and dynamic).
- **HVAC** — HVAC solutions for e.g., Comfort Ventilation for General Building Utilities and Special Ventilation for Clean room, Laboratories etc. with HEPA Filtering and Moisture Control.
- **Sound & Vibration** — Sound and vibration calculation and measuring, Modal structural analyses, Sound attenuator design (Absorption, ¼ wavelength and Helm-Holz type)
- **Electric** — Experience with
  - Lighting
  - Low voltage systems
  - MCC Design
  - Transformer
  - UPS-system
  - Emergency back-up generators
  - Heat Tracing
- **ATEX** — Experience with ATEX directive in relation to Flammable Fluids and Gasses as well as Combustible Dust/Particles in Industrial Processes.
- **Layout & Space Management** — Overall layout coordination and space management with Experience from Small Production Units to Large Utility Power Plants.

<u>Managing wise:</u>

- **Management, Internal** — Managing experience with both European and Indian Employees/Engineering teams.
- **Management, External** — Managing sub-supplier engineering teams in Europe and Asia
- **Team leader** — Managing teams like Design Teams, PDMS layout teams etc.
- **Support and coaching** — Ensuring/enforcing lean engineering approach and utilization of advanced engineering tools such as AVEVA PDMS and General Engineering Databases (e.g. COMOS).

- **Project Management** External PM towards clients and internally PM towards project team

References

Selected project references from the last 30 years of work life:

NCC Danmark A/S: PDEMAR **2019-05>2021-05-31** **NCC Employee** **PlantWare Engineering Platform**	**Company Head Quarters for DFDS, Copenhagen, Denmark.** Lead Engineer till 3D designer for all technical installations for both Engineering and Construction Phase: • Heating System, District Heating (*) • Heating System; Domestic (*) • Cooling System – Main and Back-up Propane based, and CO2 based kitchen utility (*) • Water – Raw, Technical, Hot Tap Water, Osmosis (*) • Sewage System (*) • Drain System – Fan Coils in Cooling Room and Server Rooms (*) • Gases – Compressed Air and Nitrogen (*) • Sprinkling – Project Responsible Engineer • Outfitting – Toilets, Change and Bathrooms, Café's etc. • Biowaste (*) • Kitchen – Kitchen Design including utilities. • Ventilation (*) • Electrical Installations; Building including e.g. PBS, UPS and Emergency Generator • Electrical Installations: Installation for Machinery including both PDB and MCC's • Solar Panels – Project Responsible Engineer • BMS; Functional Descriptions, Specifications etc. • Network Installations; Technical (M-bus, MODBUS (IP/RTU), KNX etc.) (*) • Steel Structures: Shafts – approximately 25t with platforms, supports structures etc. • Steel Structures: Roof Installation – approximately 80t with integrated pipe supports and supports for Solar Panels etc. • Elevators and lifts • Doors – Sliding, Revolving and generally actuated doors. • Network Safety • Building Security: Access Control, Boundary Security and CCTV • Flooding Protection – Sewage and Surface Systems • Indoor Climate – Simulation and Design • FAT and SAT • Commissioning *) For these areas work included Process Design, Sizing, Equipment Selection, PID, 3D arrangement, fabrication drawing (Pipe Isoletrics). The project is for DFDS Seaways new Head Quarters in Nordhavnen in Copenhagen.
WicotecKirkebjerg; NovoNordisk **2015-12>2016-11** **Engineering: PlantWare Employed** **Construction; WK Employed**	Project Manager / Lead Designer for • Neutralization plant for NovoNordisk APX project in Hillerød; a

full EPC Contract based on Client PID,
- Waste/Kill plant for NovoNordisk ED2 project in Kalundborg; a full EPC Contract based on Client PID,
- Steam, Condensate, Heating etc plant for NovoNordisk ED2; a full EPC Contract based on Client PID,
- Cooling Central for Herlev Hospital with 6 off Cooling Compressors, a full EPC Contract based on Client PID,

For all above EPC Contracts, the Engineering Scope was

- General Arrangement / 3D
- Detail Arrangement with generation Fabrication Drawings.
- Piping
- Instrumentation
- Support Steel
- Pip Supports
- Platforms, galleries and access stairs and ladders
- Electrical – MCC, cable tray arrangement
- Process Control
- Equipment sizing – Vessels, Pumps, Filters, Heat Exchangers etc.

WicotecKirkebjerg; GAPS (Hospital)
2015-04>2015-08
PlantWare Employed

Psychiatric Hospital with Prison; Slagelse, Denmark

Construction Project Manager for Building Utilities:

- Water,
- Sewage,
- Heating,
- Cooling
- HVAC

for a new psychiatric hospital in Slagelse including e.g. Swimming Pool, Dentist, Sports Facilities.

Aker Solutions; Johan Sverdrup
2014-05>2015-03
PlantWare Employed

Oil Drilling Rig on the Norwegian Continental Seabed

- Lighting concept and LED study – investigation into CAPEX and OPEX impact of changing to LED lighting on the Johan Sverdrup project.
- PRE (Project Responsible Engineer) – Lighting Fixtures BE555
- PRE (Project Responsible Engineer) – Heat Tracing BE543

Aker Solutions; ELDFISK 2/7S
2014-01>2015-03
PlantWare Employed

Oil Drilling Rig on the Norwegian Continental Seabed

Elektro as-built documentation for Oil & Gas offshore platform – export from COMOS to Intergraph's SmartPlantElektro (SPE). and SQL-update of databases and generation of

- Single Line Diagrams,
- Single Line Index drawings
- Cabling Drawings
- Electrical Consumer List
- Documentation

SPX Flow Techn.: ArNoCo (ArlaFoods)

Lactose Facility (at Diary), Flensburg, Germany

Lactose
2012-05>2013-12
PlantWare Employed
	Overall Layout Engineering of a Lactose factory including
	• 3D Layout coordination,
	• Detail Engineering of all Piping
	  o Utility – Black – Water, Steam, Condensate etc.
	  o Utility – Clean
	  o SIP
	  o CIP
	  o Product lines for Cheese and Milk Whay
	  o Process pipes.
	• Detail Engineering of
	  o Support Structures
	  o Access Platforms
	  o Gangways
	  o Stairs
	  o Ladders,
	  o Pipe Supports Racks
	  o Coordination with end-client of building details.
	• MEL/Load plan coordination with client
	• Procurement packages
	
	Design work was performed with AVEVA PDMS.

Vattenfall, Amagerværket **2012-01>2014-04** **PlantWare Employed**	**Velocity Induced Flow Disturbances; Copenhagen, Denmark** Flue Gas duct design inclusive of CFD-calculations of pressure drop and velocity distribution. Investigation into flow related problems with excessive pressure loss and non-unified velocity profile. Based on CFD calculations new guide vanes was inserted.
Presbyterian Hospital **2005-2006** **PlantWare Employed**	**Back Pressure Optimization for Gas Turbine, NYC, New York.** Flue Gas Duct design inclusive of CFD-Calculations for reducing the back pressure for an add on Gas Turbine to an existing installation.
GE HealtCare, pKC dextran prod. **2010-05>2011-12** **PlantWare Employed**	**API – Active Pharmaceutical Ingredient – factory, Zealand, Denmark** Project Manager/Lead Engineer for an EPCm project for a 100 mill DKK -brown field project producing of API Dextran: • Environmental improvement with local authorities – execution approvals • Approval of building changes with local authorities – planning – execution approvals • Overall Approval of Ethanol storage and processing with Beredskabsstyrelsen (main Danish body for fire and explosion safety) • Planning of the technology transfer from GE HealtCare in Staffanstorp (SE) to Denmark – both process wise and de-commissioning of equipment and re-commissioning again on new site • Construction Management • Process design, calculations, PID, pipe sizing

	• Piping – Basic Utility, Steam, Condensate, CIP, SIP, Waste, HPW, Dextran, Ethanol etc. • Structural design of platforms, building supports etc. • Mechanical Design • HVAC – Laboratories and production • Rotating Equipment – Pumps, Compressors, Separators • Powder Handlnig: Design and manufacturing of own fluid bed dryer along with powder handling system for weighing and storage etc. • Static Equipment – Heat Exchangers, Vessels, Tanks etc. • Steam Boiler plant with Saturated and Super-Heated Steam • Ethanol Storage Facility • Ethanol Distillation Facility • Hydrolysis Facility for HCl treatment of product • Sedimentation Facility with ethanol-based separation • Spray Drying Facility with own design of Spray Tower • Fermentation Facility with pressurized fermenting tanks. • CIP Facility • Laboratory design – 6 different labs from goods reception to testing of final product. • Platforms, access stairs etc. • Electrical • Instrumentation; Control Valve Sizing • Instrumentation; Measuring Technology • Control system – The control system was prepared for FDA approval (Chapter 21 part 11). System was developed in cooperation with Rockwell Automation in Ireland.
Aurhus University, iNano – SCF **2007-12>2008-05** **PlantWare Employed**	**Autoclave for Super Critical Conditions** Engineering of an autoclave for 600°C @ 600 barg for Super Critical CO2 processes. The autoclave had gold lining and gold gaskets. Design according to PED.
Grundfos, Super Critical Fluid – SCF **2007-03>2008-02** **PlantWare Employed**	**Test facility for Super Critical Process Plant – Super Critical CO_2 with 300 degrees @ 300 barg.** General Project Engineering Static equipment such as reactors and vessel as well as piping installation for a design conditions of 340°@ 300 barg. • Overall plant design • Pipe design according to EN13480 • Vessel design according to EN13445 • Pipe Support • Pipe flexibility calculations with ROHR2. • Pipe design was done with AVEVA PDMS.
Vestforbrædingen I/S, Heat Recovery Project **2006-05>2007-02** **PlantWare Employed**	**Waste Incineration Plant, Copenhagen, Denmark** Engineering of piping and support steel for a heat recovery project based on utilization of waste energy from flue gas scrubber. • Site measurement and Overall Layout

	• Pipe detailed design included special designed Tees and Nozzles according to EN13480 including 3rd party design approval • Pipe flexibility Calculation according to EN13480 with ROHR2 • Pipe support design • Pipe bridges design • Purchase packages • CE-marking
I/M Skaugen, Gas- and Chemical tanker 2006-05>2007-06	**Combined Gas (LPG) and Chemical Tank Ship** Detail engineering of outfitting of piping and support structures for a combined LPG gas and chemical tanker. Multi Discipline engineering of • Piping – Process and Utility • Electrical – power distribution system • Structural – on deck support structures and access platforms • Mechanical – Cooling compressors, shell/tube and plate heat exchangers Design was bas on GL classing of the vessel.

CMC Biologic, Pharmaceutical facility
2002-2003
PlantWare Employed
Clients:
• **CMC Biologic**
• **GEA Liquid Scandinavia**
• **MTH**
• **Birch&Krogboe (NIRAS)**
• **Nordkranen**
	Pharmaceutical Production Facility, Copenhagen, Denmark
	
	Project Manager and Design Lead for plant design of a pharmaceutical facility in Copenhagen:
	
	• Construction Support
	• Piping:
	  o Basic Utility,
	  o Steam Raw and Condensate
	  o Clean Steam for SIP
	  o CIP System
	  o HPW – Clean Water Distribution
	  o Chemical Distribution, Lye and Acid – both Industrial and Clean grade
	  o Waste (General, Ethanol, Methanol etc.)
	  o Product etc.
	• Mechanical Design
	  o Vessels Buffer preparation
	• HVAC
	  o Utilities area
	  o Staff Facilities
	  o Laboratories (General and Clean)
	  o Production Areas.
	• Other
	  o Steam Boiler plant
	  o Cooling Plant
	  o Fermentation Facility with pressurized fermenting tanks.
	  o CIP Unit/Facility
	• Laboratory design – 6 different laboratories from goods reception to testing of final product as well as production preparation
	• Buffer Preparation Plant for HPLC Supply
	  o Process design
	  o Process calculations

	o PID o Pipe sizing o Equipment Sizing – Pumps, Heat Exchangers o Instrumentation
Factor 7, NovoNordisk facility **2001-2002** **PlantWare Employed**	**Pharmaceutical Production Facility, Hillerød, Denmark** Basic and detail engineering, construction and commissioning management for utility installations – steam boiler plant, heating plant and freshwater plant. • Overall process design • PID • Process Calculation, Sizing of Piping, Pumps, Heat Exchangers etc. • General Arrangement and Layout • Piping – EN13480 design for steam, condensate, heating etc. • Structural Steel and Platforms • Pipe Support • Air and flue gas ducts including heat recovery system • Instrumentation Packages • Electrical Packages • Control System Packages • Purchase packages • CE-marking
Amager2, DONG Energy **1993-05>1998-02** **BWE Employed**	**Large power plant project.** Deputy Project Manager Lead Engineering for following areas: • Overall plant layout o Plant design o Space management. • Structural Steel • Platform package with access stairs and ladders – in total 15.000 sqm of platforms. • Air and flue gas ducting from 4.5m inlet duct to 5.9m outlet duct • Axial flow fans for SA, PA and FGD positions (largest one with 7MW/10kV motor) • Fuel System Solid; Coal Firing System with Coal Mills and Coal Dust Distribution System (later adapted for handling wooden pellets) • Fuel system Liquid and Gaseous (N-gas, Fuel oil and Oil-emulsion) package • Sound insulation/proofing of ducting and other installations • Sound attenuator design for air and flue gas ducts • Damper package – guillotine, louver and regulating types • MEL/Civil Load and coordination with Client • Planning of construction work.
Various, Delta Sound and Vibration **1990-08>1991-11** **Delta Employed**	Various assignments related to sound and vibration issues like e.g. • Modal analysis of structures • Laboratorial sound measurements in anechoic measuring rooms

	and data analysis – e.g. large model measurement program for sound propagation from large stacks.
	• External Sound
	  o Measuring,
	  o Data-processing of large quantity measuring points
	  o Calculation
	• Consulting - sound and vibration relation issues

Personal References

Selected personal references:

Building Utilities:

- **Thomas Kruse (DK);** Head of Production; NCC Denmark (Mail: tks@ncc.dk; Mobile: +45 4170 4004); Colleague from 2019-04 till 2021-06.
- **Peter Noyé (DK);** Specialist Engineer, NIRAS (Mail: pno@niras.dk; Mobile: +45 2823 8244); Counterpart on Client side 2019-10 till 2021-06
- **Christoffer Borgwardt-Stampe (DK):** Specialist Engineer, Rambøll (Mail: cheb@ramboll.dk; Mobile: +45 5161 6087); Colleague from 2018-08 till 2019-03 and Supplier from 2019-06 till 2021-06.

Oil & Gas Business:

- **Jørgen Lynn-Pedersen (DK)**; Lead Electro @ ELDFISK; Aker Solution (Mail: Jorgen.lynn@leander.dk; Mobile +45 40 55 51 08); My manager from 2014 - 2015
- **Kevin Morris (USA)**; Sr. Facilities Development Engineer; ConocoPhillips (Mail: kevin.r.morris@conocophillips.com); My client counterpart from 2014 – 2015. Stationed in Alaska now – GMT+10.

Pharmaceutical & Biotech:

- **Morten Munk (DK)**; Director - Global Alliance Management; FUJIFILM Diosynth Biotechnologies; Copenhagen; Denmark (Mail: cmcmunk@gmail.com; Mobile +45 40742254); Client from 2001 – 2003 and 2011 – 2013.
- **Rolf Haglund (SE)**; Program Manager; GE Healthcare; Upsala Sweden (Mobile: +46 70 538 50 50); My Client 2006 – 2008 and 2010 - 2012

Private

I have been married to Marianne for 33 years and have a daughter at 29 years who has graduated as an engineer January 2017 and a 24-year-old son education for CNC Technician and just about to leave home. My hobbies/interest have for most of the years I was operating my own company been work related to the daily operation and development of this. For the last years focus has been more on travel and upgrading of house and summer house.