



PETER VAN DER SCHANS



Peter van der Schans, a Principal with Long International, has over 40 years of project management, engineering management, and engineering experience. His extensive international experience includes the overall responsibility for engineering, project control, procurement, construction, and start-up of oil refining, oil and gas, gas to liquids, petrochemical, chemical, industrial facilities, municipal and refinery hazardous waste processing, and environmental projects. His experience covers all project phases from feasibility studies, preparation of FEED packages, EP and EPC project execution to start-up and operational troubleshooting. He has extensive experience in execution of refinery and petrochemical plant projects. He has analyzed delay, cost overrun, and lost production claims for refinery, offshore, and petrochemical plants.

Mr. van der Schans has experience in detailed commissioning planning of refineries, and mechanical completion and handover efforts, and has extensive commissioning and start-up experience. He also resolved many warranty claims to the satisfaction of owner and contractor by technical and operational analysis of damages. He participated in many HAZID and HAZOP reviews, and functioned as HAZOP Chairman. He was an expert witness in a large reactor damage claim, and for a loss of production claim for a chemical plant. He was a Process Consultant for FPSO conversions. He prepared Invitations to Bid and bid evaluation criteria and participated in bid evaluations and contract negotiations with licensors and contractors for US \$50 million to US \$450 million contracts on behalf of the owner.

Before joining Long International, Mr. van der Schans served as Senior Project Manager with Parsons E&C for five years, primarily as a leader of Project Management Consulting Teams and as individual Project Management Advisor for Middle Eastern Refiners and Oil Producers. He also served 23 years with Badger and Raytheon Engineers and Constructors as a Process Engineer, Technical Services and Start-up Engineer, Project Engineer, Project Engineering Manager, and Project and Sr. Project Manager. He started his career with Selas of America in process design, engineering, and start-up of Hydrogen, Ammonia and Methanol Syngas, and Olefins plants. He served as Director and Vice President of Engineering and Technology for Power Recovery Systems Inc., and as Director for Project Engineering Services GmbH.

EDUCATION

B.S., Mechanical Engineering, Institute of Technology, s-Hertogenbosch, The Netherlands

PROFESSIONAL REGISTRATIONS

Institute of Professional Engineers, The Netherlands (Process Engineering).

LANGUAGES

English, Dutch, German, working knowledge of French and Italian



TECHNICAL EXPERIENCE

Representative U.S. and international technical experience includes:

- Analysis of the impacts of technical changes after the design was frozen on a biodiesel plant
- Analysis of contractor claims on an LNG terminal project.
- Supported the owner in resolving a subsea contractor's prolongation claim on an FPSO project.
- Assessed contractor's claims on behalf of the owner for change orders, delays, and acceleration regarding the design and installation of the Topsides for a deep-sea crude oil FPSO project to be installed in Brazil. Evaluated the contractor's claims regarding loss of productivity for the refurbishment work of the FPSO vessel and for the Topsides installation in Dubai.
- Analysis of cost overruns and delays of an upstream oil sands production facility.
- Analysis of shutdowns of an MTBE plant in Canada and a related loss of production claim. Testified in court as expert witness.
- Analysis of delays to the start-up and commissioning of an Upgrader Refinery that was built to process bitumen from a tar sands production facility in Canada. The delays were allegedly caused by a fire at the tar sands production mine site, which delayed the transport of bitumen to the refinery.
- Technical advisor to the owner during the completion of a gas-to-liquids plant in the Caribbean.
- Performed an analysis of the delays associated with the handover work, mechanical completion, and startup/commissioning of a chemical plant in The Netherlands. Issues involved industry norms for pre-commissioning, mechanical completion, commissioning and start-up of the project, and whether the parties followed the contractual specifications for mechanical completion and turnover of the facility.
- On behalf of the owner, performed an analysis of causes of cost overruns incurred by the contractor on an oil terminal project in Alberta, Canada. Reviewed and compared bid package drawings with Issued for Construction drawings to determine if the owner had a basis for disputing the contractor's costs.
- Reviewed the contractor's ITB package for preparation of the FEED for the design of the Topsides facilities for an offshore deep-sea oil & gas production platform in the Gulf of Mexico.
- Analysis of a claim associated with the placement of undersea oil & gas pipelines in the Gulf of Mexico. Participated in the preparation of an expert report regarding technical issues of entitlement for cost overruns.
- Project Management Consultant for Abu Dhabi On-Shore Oil Production Company – Bu Hasa Field Upgrade and expansion to 700,000 BPD.
- Project Management Advisor for FEED execution of a refinery hazardous waste facility for TAKREER, Abu Dhabi Oil Refining Company and preparation of EPC contract bid documents and bid evaluation documents.
- Project Management Consultant responsible for the Project Management Consultancy Team for a Base Oil Refinery project for TAKREER in Abu Dhabi.
- Project Manager responsible for the first phase of the Shell Goldeneye on-shore gas facilities for an offshore gas development project.
- Project Management Consultant (PMC Project Manager) for the engineering and procurement phase of a large refinery upgrade project for NODCO. Anchor units were a UOP Platformer and an FCC unit.
- Start-up Superintendent for the Rayong Refinery.



- Project Manager responsible for the detailed engineering, procurement and construction phases of the Crude Block of a grass roots refinery project for the Rayong Refinery Company, Thailand. (CDU, CDR, HVU, VBU, RFO).
- Project Manager responsible for the engineering and procurement of a refinery revamp project for Natref, Sasolburg, South Africa. (CDU, BOC, NHT, FCCU, PLF, ATU).
- Project Manager responsible for the fast-track engineering, procurement and construction of an expansion of an EB/Styrene plant for Huntsman Chemical Corp. Texas, USA.
- Project Manager for several revamp projects for oleo chemicals for Procter & Gamble and Unilever US.
- Vice President of Engineering and Technology for Power Recovery Systems, USA, responsible for engineering technology development of gasification-based municipal solid waste power recovery units.
- Project Manager responsible for all site activities for Badger Engineers on the Sasol II and III synthetic crude oil plants. These activities comprised construction liaison, on-site engineering and start-up assistance.

PROFESSIONAL EXPERIENCE

Long International, Inc.

Littleton, Colorado (June 2004 to Present)

As a Principal with Long International, Mr. van der Schans provides expert services in all facets of contract dispute analysis and resolution, litigation/arbitration/mediation support, and expert testimony. He has been responsible for the expert analysis of a dispute involving the delayed start-up and commissioning of an oil upgrading facility feeding synthetic crude oil derived from tar sands, technical assessments of defective installations on an offshore oil production facility, analyses of disputed change orders on an FPSO facility, analyses of subsea contractor claims, the expert analysis of a dispute related to the mechanical completion and precommissioning of a chemical complex in the Netherlands, and the technical analysis of a loss of production claim for an MTBE facility in Canada, subsequently serving as an expert witness in the case. Mr. van der Schans also served as the technical advisor to the owner during the completion of a gas-to-liquids project in the Caribbean.

Parsons Energy & Chemicals Group

Abu Dhabi (1999 to October 2004)

ADCO - Abu Dhabi On-shore Oil Production Company

Project Management Consultant (Engineering) for a major oil field upgrade project, representing the Client in the EPC contractor's office.

TAKREER Central Environment Protection Facilities, Abu Dhabi.

Project Management Advisor to TAKREER during the FEED execution of a refinery hazardous waste facility including incineration, thermal desorption, centrifugation, solidification, landfills, and all associated facilities.

TAKREER Base Oil Refinery

Project Management Consultant on the first phase of a Base Oil Refinery deploying the hydroprocessing route to base oils (VDU, PDA, HCK, IDW, SRU). Developed Invitations to Bid and Licensor and FEED contractor bid evaluation criteria.

Shell Goldeneye Feasibility Study

Project Manager for the first phase of the on-shore facilities for a new North Sea gas development for Shell UK, incorporating Full Wellstream Tie-Back to the on-shore gas plant.

Nodco Refinery Expansion Project

Project Management Consultant leading a Project Management Team integrated in the Client Resident Team in the EPC contractor's offices in Seoul, Korea. The project was a revamp/expansion of the Nodco refinery in Qatar (CDU, HDTs, PLF, RFCC, LPG, SRU, etc.) tank farm and utilities.

Raytheon Engineers & Constructors

USA (1988 to 1999)

Rayong Refinery, Rayong Refinery Company Thailand

Senior Project Manager and Start-up Superintendent responsible for detailed commissioning and start-up planning for this grassroots refinery and for the commissioning and start-up assistance. After hand-over of the refinery, was responsible for the resolution of warranty issues, resolving a number of issues to the satisfaction of both the Owner and the joint venture contractor. The refinery included a combined cycle power plant. Also functioned as Project Manager on an environmental project and a UOP Penex isomerization project for the same Shell/RRC refinery in Thailand

Rayong Refinery Project, Shell The Hague

Project Manager responsible for the detailed engineering phase of the crude block of this LS grass roots refinery project (CDU, CDR, HVU, VBU, RFO). Also was Engineering Manager for the preparation of the Project Specification (detailed FEED) for this refinery project.

Natref Refinery Revamp, South Africa

Project Manager responsible for the detailed engineering and procurement of a lump sum refinery revamp project executed in South Africa (CDU, BOC, NHT, FCCU, PLF, ATU).

EB/Styrene Plant Expansion, Huntsman Chemical Corporation, USA

Project Manager responsible for the fast-track engineering, procurement, and construction of an expansion of an EB/Styrene plant in Houston, Texas. Moved to site to lead the project during the construction, which was performed during a maintenance turn-around.

Industrial Facilities, US

Managed several revamp projects for oleo chemicals facilities.

Power Recovery Systems

USA (1986 to 1988)

Vice President Engineering and Technology – Director of Engineering responsible for engineering execution and technology development of municipal solid waste-to-energy plants and related projects deploying fluid bed gasifiers.



Badger

USA (1975 to 1986)

Kukdong Refinery, Korea

Engineering Manager on a complete refinery project responsible for engineering of all process units, which included Badger-designed distillation and gas processing units and many licensed refinery units (hydrocracking, hydrotreating, delayed coking, sulphur plant, amine treating, tank farm and utilities).

Yukong Aromatics Complex, Korea

Responsible for the content and production of all P&I Diagrams.

Raytheon Environmental Project, Raytheon, California

Engineering Manager on a groundwater stripping and soil treatment project.

Sasol Three Oil-from-Coal Complex, South Africa.

Project Manager / Chief Commissioning Engineer responsible for all site activities on the Synthol and Chemical Work-up of a large synthetic crude oil plant. These activities comprised all construction liaison work and on-site engineering, start-up assistance and the engineering of start-up modifications, as well as process engineering and operator training assistance.

Sasol Two Oil-from-Coal Complex, South Africa.

Chief Commissioning Engineer responsible for start-up and process assistance on a synthetic crude oil complex identical to the one above. Each of these facilities included eight giant circulating fluid bed reactors, three fixed fluid bed reactors, oil stabilizers, gas compression and washing facilities, heaters, condensate treatment and steam generation and a chemical work-up facility for the separation of alcohols and other non-acid chemicals by distillation. Also was a Process Supervisor/Process Engineer with key-level involvement in the engineering of the above-mentioned synthetic crude oil plant.

Various Refinery and Petrochemical Projects, Shell The Hague

Senior Process Engineer – Process design and engineering of refinery units, lube oil facilities, and an EB/Styrene plant.

Project Engineering Services

Deutschland GmbH (1974 to 1975)

Responsibilities as manager of a small subsidiary of an engineering company included setting up the (German) subsidiary, hiring the personnel, all sales work, and managing all operations. Project/Process Engineer responsible for the design and engineering of oil gathering systems and water injection systems.

Complant Ltd.

Saudi Arabia (1972 to 1974)

Aramco Ras Tanura Refinery, LPG Plants

Served as Commissioning Engineer for LPG fractionation, treating and handling plants and for water injection facilities including large gas turbines.



Selas of America NV

The Netherlands (1966 to 1972)

Syrian Oil Authority, Homs Refinery

Start-up Supervisor in charge of the start-up team for a turnkey hydrogen plant.

Polimex, Poland

Start-up Supervisor for the hot section of an ethylene plant.

Konam, Montecatini-Edison, Courrieres-Kuhlman, NSM, ROW, Anic

Process Engineer / Technical Service Engineer with extensive commissioning and start-up and other field experience on ethylene plant hot sections, naphtha and gasoil based, steam/hydrocarbon reforming plants, and refinery units.

Various Clients

Process Engineer for process design and engineering of reforming plants for the production of hydrogen and syngas for methanol, butanol and ammonia production, and process engineering of ethylene plant front ends.