



PipeSystemConsult GmbH Company Presentation



Company Profile

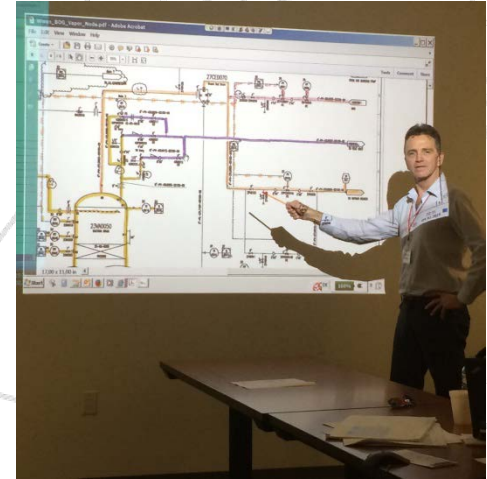
- PipeSystemConsult (PSC) is an independent engineering company that provides flexible and cost-effective consulting services to clients in the pipeline, power generation and industrial energy sectors.
- The company has over 30 years' international experience in engineering management and design.
- Our special focus areas are:
 - specialized Functional Safety Management services to IEC 61511, including HAZOP, HAZID, LOPA, SIL, QRA, Functional Safety Assessment and Audit, through CFSE-certified safety experts
 - PSC has provided independent Chairman and Scribe services for over forty HAZID, HAZOP (including HAZOP revalidation) and LOPA studies both nationally and internationally. PSC experts are certified according to IChemE and the Exida CFSE program.
 - In addition to FSM, PSC provides Engineering Management through all project implementation stages covering basic/detailed design, procurement, construction, commissioning and operation. PSC has been responsible for projects with up to 1 Billion Euro investment cost and annual engineering budgets of over 5 Million Euro.



Services

Functional Safety Management

- Hazard & Risk Analysis (HAZID, HAZOP, FTA, QRA)
- SIL Analysis (Risk Graph VDI/VDE 2180, LOPA)
- Preparation of SRS
- SIL Verification (using ExSILentia, SET, Safeguard Profiler, TRAC)
- SIL Validation (participation at FAT/SAT)
- Functional Safety Assessments and Audits
- Cyber Security Analysis



General Consulting Services

- Feasibility and conceptual study
- Project / Engineering management
- Detailed design, specification
- Authority approval and permitting procedures
- EU tendering, procurement, vetting, expediting
- Construction supervision
- Commissioning, start-up, support during operation
- Due-Diligence, Peer-Review
- Integrity Audit
- Expert Witness Services
- Technical translations (German / English)



Projects

HAZOP UPDATE, SIL VERIFICATION FOR COMPRESSOR STATION LEGACY SYSTEMS

Project Owner: Confidential

Time Frame: 2017 - 2018

Key Project Data: Existing gas transport compressor station, in operation for 10 years, comprising: electric-motor-driven gas compressor and gas-turbine-driven (GT) gas compressor

Scope of Services: Update of HRA (re-HAZOP) and SIL-analysis (Risk Graph method acc. VDI/VDE 2180), Gap analysis of existing FSM-documentation, Preparation of Cause & Effect Chart for safety and process trip logic, Investigations on site to confirm as-built status of safety-related loops, SIL-Verification using ExSILentia and preparation of compliance report (equivalent to FSA-4) according to DIN EN 61511:2012, Preparation of recommendations and priorities for implementation

HAZOP/SIL/LOPA for an LNG Reloading Station

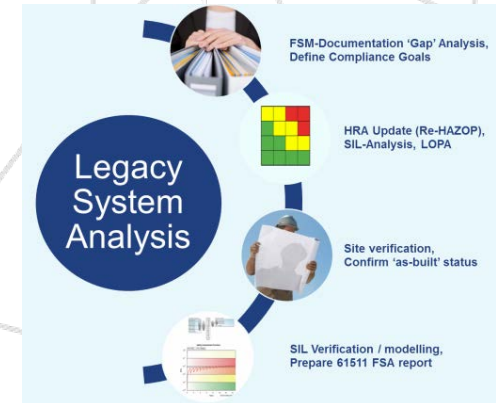
Project Owner: Klaipėdos Nafta, Lithuania

Time Frame: 2016-2017

Key Project Data: The Reloading Station will be used for storage of LNG in vacuum insulated tanks, filling of LNG to road tankers, filling of LNG to ships as fuel (bunkering) and evaporation of LNG to provide natural gas to local gas consumers. LNG is supplied to the station from an LNG carrier..

Scope of Services: Provision of risk evaluation services, including::

- HAZOP Workshop at Owner's premises
- SIL-Analysis / Workshop using calibrated Risk Graph Method
- LOPA of critical SIF functions
- HAZOP and SIL update after design changes
- Preparation of Safety Requirements Specification (SRS)



Projects

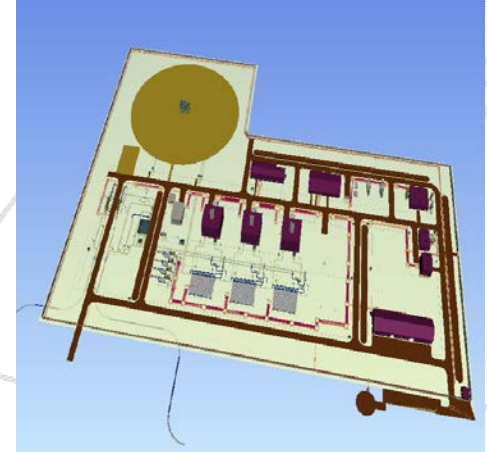
NABUCCO WEST GAS PIPELINE, BULGARIEN, RUMÄNIEN, UNGARN, ÖSTERREICH

Project Owner: Nabucco International Company (NIC)

Time Frame: 2012 - 2013

Key Project Data: FEED Design of 1327 km 48" natural gas pipeline, capacity 23 bNcmy, including 14 compressor stations, 3 border metering stations, 3 offtake metering stations in four countries

Scope: Provision of support to Owner in process/mechanical disciplines to overview the design of FEED Engineer in relation to above-ground installations, including participation in HAZOP/HAZID, review and approval of process / mechanical documentation



INTEGRATED OPEN SEASON (IOS)- KOMPRESSORSTATIONEN, DEUTSCHLAND

Project Owner: Gasunie Deutschland

Time Frame: 2009-2014

Key Project Data: Concept Selection, Basic Design and FEED of five compressor/metering stations (4x brownfield, 1x greenfield) in North Germany (installed capacity 15 – 50 MW per station) and 64km, 36" gas pipeline loop

Scope: Engineering management, responsible for coordination of multi-disciplinary design of compressor stations during various design phases. Lead of HAZOP, HAZID, SIL and Risk Analysis for various compressor and metering stations and pipeline



Projects

Latest Projects

- HAZOP Update, SIL Verification of legacy safety systems for a gas compression station
- HAZOP, LOPA, SIL Analysis for an LNG Reloading Station
- Nabucco Gas Pipeline – Technical Integrity Review
- TAL-OR – Planning of relocation of 26" crude oil pipeline section
- Construction Supervision, Commissioning and Start-up Support for Bunde-Etzel Gas Pipeline (60 km, 48" diameter, PN 100 Design Pressure)
- EXELL Compressor Stations and Pipeline Project for Gasunie, Germany – Engineering Management for Concept Selection and Functional Design of three compressor stations in North Germany, follow-up services for over 15 HAZOP/SIL studies/updates
- Medupi Power Station, South Africa – Planning of LP Services for Hitachi Power, Germany
- Abu Dhabi Crude Oil Pipeline (ADCOP) – Follow-up HAZOP for EPC Contractor (China Petroleum Engineering & Construction Corporation)
- Crude Oil Collection Manifolds (PMAN), Petrom, Rumania – HAZOP of 34 manifolds
- Technical Audit Services for OGC, Oman – Inspection and risk-based assessment of plant condition, operation and maintenance practices at OGC Gas Supply Stations (GSS) and Pressure Limiting Stations (PLS)



About us

- PipeSystemConsult Ltd (PSC) was established in Munich, Germany in 2008 with the aim of providing flexible and cost-effective consulting services to clients in the pipeline, power generation and industrial sectors. The company is owned and led by Tim Callan (ME, CFSE).
- PSC specializes in implementation of Functional Safety Management in accordance with IEC 61511. PSC covers the whole Safety Life Cycle, from initial Hazard and Risk Assessment (HRA) through detailed design, implementation, commissioning and operation up to decommissioning. PSC also assists clients in the development of projects at the conceptual and feasibility stages. This includes the preparation of main system and plant layout concepts, cost estimates, implementation schedules, financing, and procurement and construction strategies.
- In close alignment with its clients, PSC applies its experience and know-how in carrying out studies and analyses, so that all factors can be assessed and project needs met in a timely and cost-effective way.
- Through co-operation with affiliated engineering companies and leading industry experts, PSC sets up multi-disciplinary project teams to provide tailor-made consulting services for medium- to large-sized projects.



Contact

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