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Reference List

Year	Customer	Project	Scope of Work
Today/ 1999	Various	Various	Engineering consultation on materials, material selection, heat treatment, alternative materials, welding etc.
Today/ 1999	Own	Software	Development of Price Master II and other pipe estimation and project handling software
Today/ 1999	International	Software	Development of Bellows Master II and other compensator design software using international standards and own development
Today/ 1999	Own	Software	Development of multiple small engineering software applications
Today/ 2007	Own	Design systems	Integrated expansion joint design method using internationally recognized own proprietary software, MathCAD calculation sheets, FEA, CAESAR II, 3D modelling and Word processor. All compiled into one electronically signed PDF file with manufacturing drawings.

Today/ 2004	Own	Drawing systems	Development of highly productive 3D drawing system using Inventor for compensators and other items.
2013/ 2014	Own	Software	Development of design calculation methods for rectangular bellows based on EJMA, other specifications and good engineering practice
2014/ 2015	Own	Software	Development of design calculation software for thick wall bellows
2015	Own	Software	Development of design calculation software to establish bellows element metal temperature
2015	NN	Training	Training presentation Introduction to piping design & valve selection, 2 days
2015	NN	Beverage Industry	Investigation and reporting on failed expansion joint
2015	Various	Various	Pro Bone consulting on bellows. Training young engineers
2015	SAC	Refinery	Design of bellows for HEX nozzle
2015	SAC	Power Station	Design of high pressure bellows for HEX
2015	NICRO	Chemical Plant	Stress analysis of small bore steam and condensate lines
2015	SAC	Refinery	Design of HEX bellows
2015	SAC	Steel mill	Design of special rectangular bellows
2015	Ngoboyi	Training	ASME B31.3 training presentation, 3 days
2015	MegChem	Training	Expansion bellows training to pipe engineers
2014	PDPS/SASOL	Training	Expansion bellows training to pipe engineers
2014	Various International	Various	Bellows material and design consultation

2014	Various	Various	Assisting pro bono young engineers to solve bellows related issues
2014	NN	Jet engine test facility	Material and design consultation
2014	SAC/KENTZ	Petrochemical Plant	Design of HEX expansion bellows including establishing various operating conditions
2014	SAC	Chemical Plant	Evaluation of existing bellows element of a failing HEX and recommendations for replacement
2014	SAC	Refinery	Design of two high temperature flue gas duct replacement expansion bellows
2014	SAC	Training	Two day expansion bellows design and software training
2014	NN	Petrochemical Plant	Design of a replacement bellows and special tools to fabricate it for a heat exchanger
2014	NN	Petrochemical Plant	Site evaluation and design of emergency replacement of two bellows elements.
2014	Various	Food processing plant	Technical consultation including CAESAR II calculations on the design of high temperature air ducts and design of associated expansion bellows
2014	SAIBA Engineering	Chemical plant expansion joint	Engineer's design verification and approval to SANS 347 requirements
2014	SASOL Nitro	Chemical Plant	Technical assistance to replace failed expansion bellows
2014	Steinmüller	Power Station Export, various	Design and mass estimation of rectangular expansion joints for tenders
2014	NN	Chemical plant	Design of high pressure (100 bar) reinforced hinged expansion joint including FEA

2013 /2014	Steinmüller	Fabrication	Design of various special tools for expansion bellows fabrication
2013 /2014	Steinmüller	Chemical plant	Design of a heat exchanger expansion joint
2013 /2014	NICRO	Chemical plant	Small diameter steam and condensate line design and stress analysis (CAESAR II)
2013	NICRO	Chemical plant	High temperature gas duct design
2013	Steinmüller	Power Station Export	Design of 24 rectangular expansion joints
2013	SAC	Chemical plant	Design of two heat exchanger expansion joints including FEA
2013	Steinmüller	Platinum Mines	Evaluation and report on two over land compressed air lines.
2013	Steinmüller	Platinum Mines	Design of two externally pressurized expansion joints including FEA
2013	Steinmüller	Sugar plant	Design of 4.5MPa, 450°C lateral expansion joint including FEA
2013	NN	Piping	Engineer's verification and approval to SANS 347 requirements
2013	Steinmüller	Training	Compensator training
2013	NN	Steel mill	Design of 2.6 m diam expansion bellows including FEA
2013	Steinmüller	HP heater	3D modelling of a HP heater to be used as template in the future.
2012 /2013	SAC	Chemical plant	Technical consultant on expansion joint related problems
2012 /2013	NN international	Petrochemical	Technical consultant on expansion joint related dispute case. Expert witness.
2012 /2013	Steinmüller	Various	Consultant on technical issues
2012	Various	Piping	Technical assistance in tender preparation

2012	SAC	SASOL	Compensator and system analysis
2012	Steinmüller	ESKOM	Design calculations of two HP heaters to EN code using MathCAD
2011/ 2012	BHR Germany	Olkiluoto Nuclear P.S.	Member J. Tolonen was nominated as Project Engineer on erection of all nuclear island pipes
2011	NN	Olkiluoto Nuclear P.S.	Technical solution to solve problem with deforming pipe ends.
2008/ 2011	BHR Germany	Olkiluoto Nuclear P.S.	Member J. Tolonen was nominated as Quality Assurance Manager to lead QA department responsible for all nuclear island pipes excluding primary loop.
2008	Steinmüller	SASOL	Various steam pipe inspections, reporting, preparation of inspection plans and inspection drawings
2007 /2008	South African Compensators	Kriel P.S.	Design of large size replacement axial pressure balanced compensators.
2007	Steinmüller	HP Steam system of a Gas fired P.S. in Northern Africa	Joint venture together with an engineer to do flexibility analysis and site inspection of MS, HR, CR and by pass steam lines on a modern large base load station
2007	Steinmüller	PF Pipes, Komati P.S.	Flexibility analysis, site inspections and reporting of PF pipe systems
2007 & 2008	Eagle Burgmann	Various	Design verification calculations of compensators.
2007	Bellow Weld	Wet Sulphuric Acid	Basic, detailed engineering and manufacturing drawings of 7 2.8 to 3.2 m stainless steel compensators for gas ducts.
2007	Thuthuka Group	CO ₂ dosing plant	Flexibility analysis and pipe design calculations of NB80 to NB 200 overland gas distribution pipe lines.

2007	Klomac	Chlorine dosing plants	Design verification and flexibility analysis of Cl injection systems
2007	Steinmüller	Grootvlei P.S.	Site survey and flexibility analysis of HP feed water system
2007	Steinmüller	Paper mill steam line	Site survey and flexibility analysis of medium pressure steam system
2006	Steinmüller	SASOL West Steam Plant	High Pressure steam pipe technical evaluation, flexibility analysis, visual inspections, project handling and report preparation (About 440 pages). 8 boilers, 6 turbines and 4 distribution headers
2006	Steinmüller	SASOL East Steam Plant	High Pressure steam pipe technical evaluation, flexibility analysis, visual inspections, project handling and report preparation (About 580 pages). 9 boilers, 5 distribution headers and over 2 km transfer line
2006	Steinmüller	Grootvlei P.S.	Main Steam and Extraction line drain designs including site measurements, design calculations, 3D modeling and drawings
2006	South African Compensators	Various	Bellows designs
2006	Kentz	NN Turbine house	High pressure and temperature pipe line estimation using P&I and rudimentary GA
2006	Steinmüller	Grootvlei P.S.	Technical evaluation and reporting of customer inquiry
2006	KOG Fabricators	Compensator product development	Basic engineering, 3D modeling and preparation of high quality 3D images

2006	KOG Fabricators	High Temperature Test Unit (PBMR)	Design of steel structure, pipes, supports, special items and vessels, 3D modeling and manufacturing drawings
2006	KOG Fabricators	Various	Expansion joint designs for inquiries and fabrication. Compensator design reviews.
2006	KOG Fabricators	Various	Preparation of A1 to A0 size high quality posters of our 3D designs
2005	Bateman	ISCOR	Basic engineering, design calculations and estimation of high pressure and feed water systems for a planned power station. Joint venture between 3 engineers.
2005	Chempute	Training	Official training officer for CADWorx Plant
2005	KOG Fabricators	High Pressure Test Unit (PBMR)	Design of steel structure, pipes, supports and special items, 3D modeling and manufacturing drawings
2005	KOG Fabricators	Various	Expansion joint designs for inquiries and fabrication. Compensator design reviews.
2005	Kentz	SASOL 1	Consulting and take off on over 2000 ISO piping project. Our software PM II used for project monitoring and invoicing back up.
2005	IST	Test Plant (PBMR)	Various special tool designs in 3D and manufacturing drawings
2005	KOG Fabricators	Test Plant (IST/PBMR)	Design of various high temperature expansion joints and special items, 3D modeling and manufacturing drawings.
2005	KOG Fabricators	Various	Tender preparations

2005	Steinmüller	Omnia fertilizers	Chemical plant pipe technical evaluation and detailed reporting.
2005	Steinmüller	Duvha P.S.	GO report preparation on high pressure pipes including levels, visual inspections and hanger readings.
2005	Steinmüller	Kelvin P.S.	Feed water spray line design, site measurements and drawings.
2004	bellows africa	Various	Complex expansion joint designs for inquiries and fabrication.
2004	Steinmüller	Various	Pipe take offs and erection estimations using our PM II estimating software.
2004	Steinmüller	Kriel P.S.	GO report preparation on high pressure pipes including levels, visual inspections and hanger readings.
2004	Arminco	Various	Complex expansion joint designs for inquiries and fabrication. Project handling.
2004	Steinmüller	Hendrina P.S.	Drawings for super heater shields
2004/ 2003	KOG Fabricators	Various	Basic design and pricing of oil and gas measuring skids
2004/ 2003	KOG Fabricators	Nigeria	Detailed design, 3D modeling and manufacturing drawings for 3 oil measuring skids.
2003	Arminco	Various	Complex expansion joint designs for inquiries and fabrication. Project handling.
2003	Arminco	Various	Pipe take offs and erection estimations using our PM II estimating software.
2003	Arminco	Various	Multi discipline project estimation, site visits and tender preparations.
2003	Kentz	Various	Pipe take offs and erection estimations using our PM II estimating software. Project support to customer.

2002	Kentz	Fertilizer Plant	Technical support to project manager, chute and ducting drawings and designs.
2002	Arminco	Richards Bay	N2 cabinet design and drawings
2002	Arminco	Kumba	Injection lance design, drawings and project handling
2002	Kentz	Fertilizer Plant	Steel platform design and drawings
2002	Arminco	Micro Model (PBMR)	Consultant, project handling and detailed engineering of piping
2002	Arminco	Various	Complex expansion joint designs for inquiries and fabrication.
2002	Arminco	Various	Tender preparation of piping and other projects including turn key
2001/ 2002	Kentz	Sulphos	Consulting and take off on large piping project. Our software PM II used for project monitoring and invoicing back up.
2001/ 2002	Arminco	Phalaborwa	Project handling, pipe design and drawings, material ordering and subcontractor monitoring. Multi discipline project.
2001	Arminco	Various	Complex expansion joint designs for inquiries and fabrication.
2001	Arminco	Various	Tender preparation of piping, bellows and other projects including turn key
2001	Kentz	Various	Pipe take offs and erection estimations using our PM II estimating software.
2000	Arminco	Sappi	Large special filter measurements for drawings and project handling of fabrication and erection.
2000	Arminco	Various	Tender preparation of multiple projects from single items to full plants (Turn key)

2000	Arminco	Various	Complex expansion joint designs for inquiries and fabrication.
2000	Kentz	Various	Pipe take offs and erection estimations using our PM II estimating software.
2000	Keith Kirsten's	Various	Computer support
2000	South African Compensators	Compensators	Engineering software development
2000	Advanced Software Technologies	Accounting and POS	Software development
2000	Arminco	Tutuka P.S.	Plastic pipe failure analysis
1999	SA Data technology	Accounting	Software development
1999	Steinmüller	Funen	Transport frame design and manufacturing drawings.
1999	Arminco	Various	Complex expansion joint designs for inquiries and fabrication.
1999	Kentz/JTS	Software	Development of steel structure estimating program
1999	SMP	Software	Development of RatesTool software to update estimating software prices.