ThorburnFlex

Experienced Quality Partner to the Nuclear Industry

Expansion Joint Systems | Quick Couplings & Connectors | Hose Assemblies

POWER GENERATION

Engineered Solutions for Pipe Motion

www.thorburnflex.com

Experienced Quality Partner to the Nuclear Industry

Design Tools & Capabilities

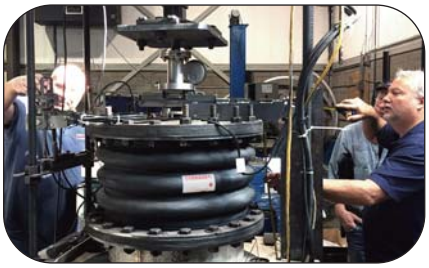
- Finite Element Analysis (FEA)
- Pipe Stress Analysis
- CAD & Solidworks
- 3D Modeling
- Mathcad

Engineering Capabilities & Experience

Thorburn's design engineering expertise is supported by advanced FEA software that offers powerful and complete solutions for both routine and sophisticated engineering problems. Thorburn's engineers can analyse and provide innovative solutions for pipe and duct motion problems including dynamic vibration, nonlinear static, linear static, thermal gradient through material wall thickness, acoustic impedance and fatigue using a common model data structure and integrated solver technology.

70 Years Experience & Proven Capabilities Worldwide

Thorburn Flex offers unmatched capabilities and expertise in applications engineering, design development and manufacture of flexible piping systems for PHWR, PWR, BWR nuclear power plants. Thorburn Flex is the only company which posses a nuclear licence for design and manufacture in the USA, Canada, Europe and China. Thorburn's role as a technological leader provides comprehensive knowledge with the broadest range of expansion joints in the industry. We have developed innovative solutions for flexible seals to transport media, vibration dampening and compensation of thermal movements.



NDT/NDE Programs & Design Verification Testing

- Radiography, dye penetrant, ultrasonic & magnetic particles
- Vacuum testing 760mm (29.9") HG and hydrostatic or nitrogen pressure testing to 1,000 bar (15,000 psi)
- Destructive design verification testing to 4000 bar (60,000 psi)
- Impulse testing to 680 bar (10,000 psi) at 204°C (400°F)
- Burst testing up to 10,000 bar (150,000 psi)
- Pliability fatigue and deflection testing ISO 10380:2012
- Seismic and vibration analysis in acceptance with ASME Sec III
- Helium mass spectrometer leak testing

Quality Certifications For Design & Fabrication

Commercial

- ISO 9001

Nuclear

- CSA N299.1
- ASME Section III NPT, Class 1 (USA)
- CSA N285.0 (Canada)
- HAF 604 (China)
- CNCAN, ISCIR (Romania)

Piping & Pressure Vessel

- ASME Section VIII Div 1 ("U" Stamp)
- ASME B31.1, B31.3, B31.5 (USA)
- CSA B.51 (Categories A & D) (Canada)
- EN 14917 PED 2014 | 60| VE Model H
- TSG (China)

High Quality Flexible Piping & Ducting Systems

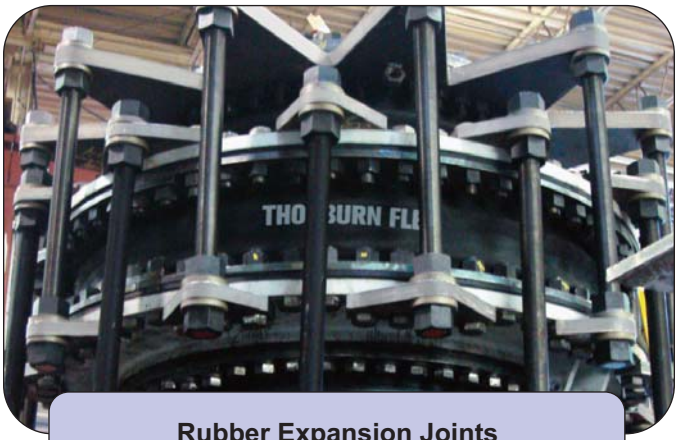
Designed to meet the requirements of ASME Section III NPT Class 1, 2, 3 & MC/CSA N285.0 Classes 1, 2, 3, 6.

Flexible Piping Solutions

Innovative Quick Couplings

Metallic Expansion Joints

Miniature Bellows Assemblies



Rubber Expansion Joints

Non-Metallic Expansion Joints

THORBURN FLEX - Canada
165 Oneida, Pointe-Claire, Quebec
Canada, H9R 1A9
Tel: +1-514-695-8710
Fax: +1-514-695-1321

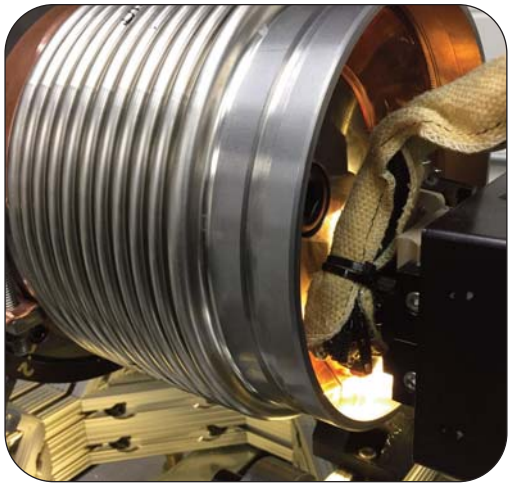
sales@thorburnflex.com

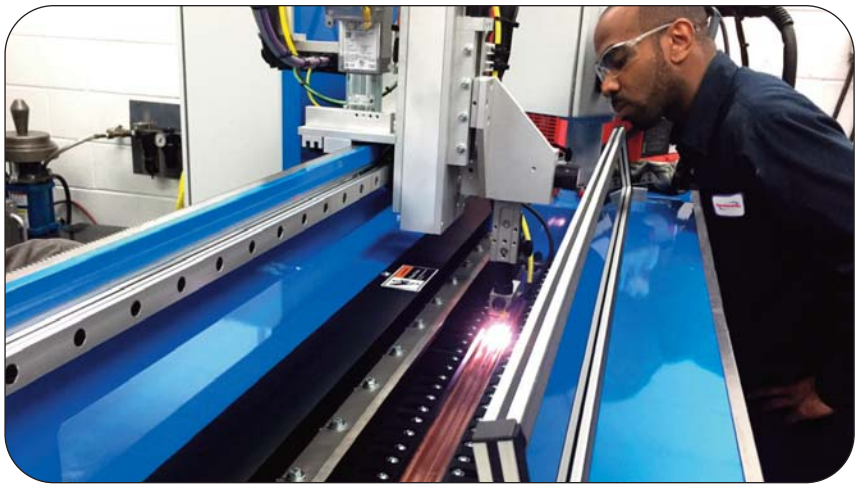
1-800-363-6613
(Toll Free North America)

European Conformity | ISO 9001 | B31.1, B31.3 | ASME "NPT" Sec. III Class 1 | ASME "U" Sec. VIII Div. 1 | N285.0, B51 CGA CR96-001 | 97/23/EC Module H | UL 536

ISCIR Romania | CNCAN Romania | EN 13480-2002 | HAF 604 China | TSG China

(CRN for All Canadian Provinces)





Welding and Fabrication Capabilities

- Arc, pulse arc, TIG, micro TIG, micro plasma, MIG, core wire & laser
- Tube welding, automated and track welding, automated flame cutting & hydro cutting
- Automated rolls, positioners & turntables
- Automated fitting to end joints welding DN 6mm (1/4") to DN 300mm (12")
- Automated hydro-forming convolutions DN 6mm (1/4") to DN 300mm (12")
- Mechanical forming convolution heights DN 40mm (1 1/2") to DN 6000mm (240")

ThorburnFlex

www.thorburnflex.com