

POWER GENERATION



A Proven Leader In Flexible Piping & Ducting Technology

Thorburn Flex Inc



www.thorburnflex.com

High Quality Custom Flexible Piping & Ducting Systems

Thorburn Flex Inc is a proven industry leader in the cost effective design, development, manufacturing and supply of ultra-high quality custom flexible piping and ducting systems. Thorburn Flex Inc is committed to a policy of continuous development and research to provide flexible piping products that set the industry standard for quality, safety, durability and ease of handling.



METALLIC EXPANSION JOINT APPLICATIONS

- Steam Turbine Crossover
- Coal Pulverizer
- HRSG Piping System
- Extraction Steam Piping
- Boiler Feedpump
- Boiler Penetration Seals

FABRIC EXPANSION JOINT APPLICATIONS

- Turbine Rotor Air Cooling
- Turbine Outlet Stack
- Diverter Bypass to Stack
- Scrubber to Re-Heater
- Steam Generator to Stack
- Primary Air to Recovery Boiler
- Precipitator to Chimney
- Turbine Exhaust to Diverter Inlet



RUBBER EXPANSION JOINT APPLICATIONS

- HVAC
- Turbine to Condensor
- Compressors
- Dust Recovery Systems
- Pumps
- Circulating Water Lines
- Process Piping
- Ventilating Systems

Operating under a strategy of global presence in niche markets, Thorburn is structured to consistently meet and exceed customer expectations of quality and value. Thorburn is also chosen by clients who understand successful project execution is based on selecting vendors who consistently provide on-time deliveries.

CRN for all Canadian Provinces



ISO 9001: 2008



CGA CR96-001
N285.0
B51



B31.1
B31.3



ASME "U" Stamp
Registered

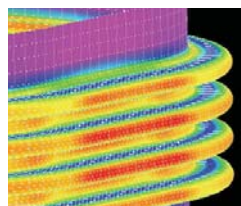


ASME "N" Stamp
In Progress



SITE SERVICES

Thorburn Flex Inc provides our clients with specialized site services such as installation supervision, quality control inspection, training, outage planning, expansion joint counter measure repair and installation.



Our staff can provide answers to piping and ducting problems by performing on-site piping stress and finite element analysis, measuring the results against the actual failure mode. Our services Include...

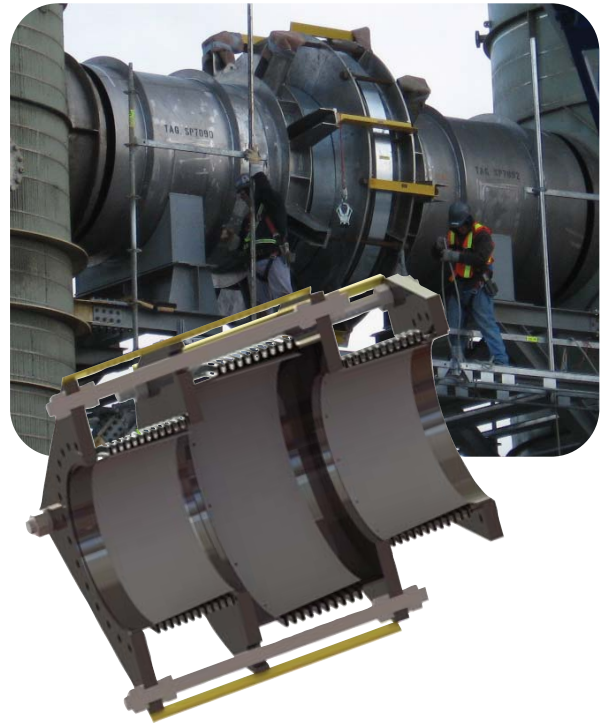
- Stress analyses to verify design.
- Assistance in drawing regeneration or updates.
- Guidance in the installation & maintenance.
- On-site consultation, engineering & training sessions.
- Maintenance service during shutdowns & turnarounds
- Refurbishing, retrofitting, repairing & replacements

POWER GENERATION

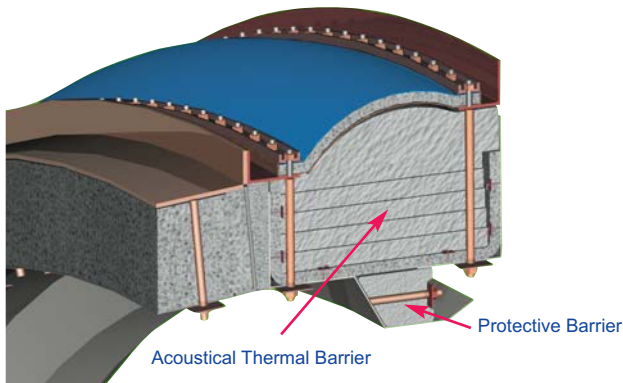
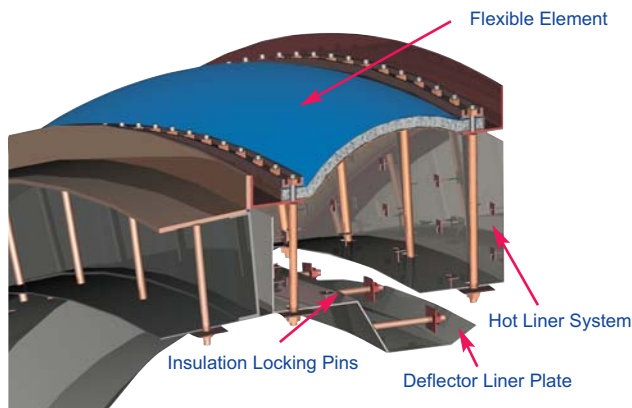
Inline Dual Purpose Pressure Balanced Expansion Joints

The Inline Dual Purpose Pressure Balanced Expansion Joint's unique design addresses the deficiencies in standard inline pressure balanced expansion joints in that it balances the pressure thrust while concurrently allowing for axial and lateral movement. It is fully capable of handling both axial and lateral movement through the use of universal line bellows and spherical washers while maintaining constant pipeline volume by absorbing axial thermal growth.

- Absorbs axial deflection
- Absorbs lateral deflection independently from the balancing and line bellows
- Neutralizes pressure thrust forces
- Eliminates the requirement for main anchors
- Protects sensitive equipment against detrimental pressure thrust forces



Inlet HRSG Gas Turbine Expansion Joints



Cold to Cold Frame Design

- Free floating hot liner system allows positive independent thermal expansion.
- Inlet deflector liner plate prevents vortex effect & protects the cavity during turbine washing.
- Internal pins lock & secure insulation during operation.
- Liner material is made from SA240 type 409/410SS.

Thermal & Acoustical Barriers

- Thermal insulation barrier reduces the 625 °C inner hot face temperature to 60°C on the flexible element's outer coils face.
- Flexible element temperature without added insulation up to 1100°C
- The acoustical barrier reduces noise level from 134 dBA @ 800Hz to 66.7 dBA at 1m distance.
- Flexible element design is impervious to internal & external corrosion.



THORBURN FLEX INC

HEAD OFFICE
173 Oneida, Pointe-Claire, Quebec
Canada, H9R 1A9
Tel: +1-514-695-8710
Fax: +1-514-695-1321
sales@thorburnflex.com

INTERNATIONAL

THORBURN ASIA - Malaysia
162 1st floor, Jalan Sungai Ujong, Taman AST
70200, Seremban, Negeri, Sembilan, Malaysia
Tel: +601-96608863
Fax: +606-7637098
sales@thorburnflex.com

THORBURN EUROPE - Poland
41 Wroclawska St.
Jelena, Góra, Poland
Tel: +48-75-752-1793
Fax: +48-75-752-1793
sales@thorburnflex.com

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

Innovative Flexible Piping & Connector Systems



*High Pressure In-Ground
Expansion Joints*



*Restrained Gimbal (10,000 kPa)
Expansion Joints*



*Refractory Lined Bed Transfer
Expansion Joints*



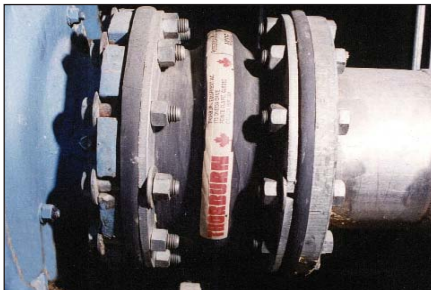
*Fabric Penetration Seal
Expansion Joints*



*Fabric Ducting
Expansion Joints*



*Fabric Barrel Hoop
Expansion Joints*



*Rubber High Pressure
Expansion Joints*



*Rubber Eccentric & Concentric Reducer
Expansion Joints*



*Metallic, Molded & Rubber PTFE Lined
Expansion Joints*



*Over 50 Years of Flexible Piping Experience
Waiting To Serve You...*