



An ISO 9000: 2008 Certified Company

# Relieve Stresses

Metallic Expansion Joints & Hoses







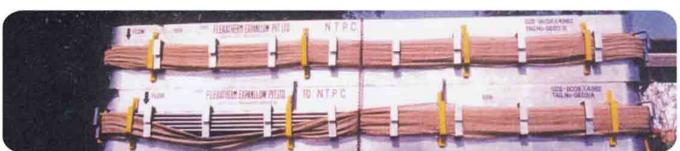












## **ABOUTUS**

Flexatherm, incorporated in 1992 and serving the industry since then, is renowned for its consistent quality, design, manufacturing capability and customer satisfaction.

It was established by a team of entrepreneurs, who has an experience of more than two decade in the similar industry. Since then, Flexatherm has become preferred supplier for metallic expansion joints and hoses for all industries.

Single minded focus on metallic expansion joints has brought matchless expertise in this field. Flexatherm's service since two decades has made it a benchmark in industry of metallic expansion joints. This was possible due to innovative expertise, visionary leadership, unparalled services and quality products.

At Flexatherm, bellows are designed on in-house developed software, which is based on EJMA standard. The state-of-the-art manufacturing and testing facility of Flexatherm, provides consistent quality from the smallest size to the largest one. Various type tests and correlation tests carried out on various prototypes assures design for satisfactory performance of the products.

Flexatherm's quality is approved by various international and national third party inspection agencies like Lloyds, Tata Projects Ltd., TUV, BV, PDIL, etc. Flexatherm's Quality Management System is certified with ISO 9001:2008 and CE-PED. approval.

#### **PEOPLE**

Flexatherm provide its employees with an environment to develop their potential and skills. Developing their entrepreneurial spirit, instead of micro-managing culture is one of the ideologies at Flexatherm.

People at Flexatherm have played a vital role in growth of the organization. The Quality Management System developed by them is appreciated not only in India but also by globally recognized organizations.

#### INFRASTRUCTURE

Manufacturing facility at Flexatherm, converges the best practices and technologies which results in superior designed end products. The total area covers 2.5 sq. mt. with 30,000 sq. mt. as manufacturing facility, 5000 sq feet of office building and remaining for storage.

The facility has a capacity to manufacture axial, universal, gimbal, hinge, pressure balance and fabricated expansion joints of size ranging from 50 NB to any upper range, which could be limited only due to shipping constraints.

## APPLICATIONS

#### Iron, Steel & Metallurgical Industries

- · Hot & Cold Blast System
- Blast Furnace
- Tuyere-Stock assembly, Reformer
- Cock Oven Batteries, Sintering System
- Copper & Aluminum Industries

#### **Cement Plants**

- Coal Mill, Kiln, Boiler,
- Various stages of Cyclone Preheater
- · Precipitator, Hooper
- Calciner, Air & R.A. Duct
- Clinker Cooling System

#### Petrochemical, Refineries

- Oil & Natural Gas Industries
- · Pulp & Paper Industries
- · Shipbuilding Industries
- Defense, Navy, Aerospace

# **Power Industries**

- Nuclear Power Plant, Pipe Penetration
- Main & Emergency Air Lock System
- Air Cooling System, Economizer
- · Turbine System
- Boiler System-Hot Air Gas Ducts
- · Hydro Power
- · Power Transmission

# Chemical & Fertilizer

- Sulfuric acid, Phosphoric acid
- Ammonia, Aniline, TDI
- Urea and Methanol
- Nitrobenzene, Di Nirto Toluene

# Other industries

- · Engine Manifold
- Heat Exchangers
- Diesel Locomotives
- · Hot & Cold Piping
- Sewages Water System





# **AXIAL JOINTS**

These joints are the simplest form of flexible joints usually used for axial movement in straight pipe-run with end connections as flanges or pipe end. It can also absorb deflection in any direction or plane. In case of an UN–RESTRAINED CONDITION (Untied), this joint cannot control the movement or resist the pressure thrust. The piping designer should provide anchoring & guiding to constrain & control pressure thrust & specified movement. In case of RESTRAINED (Tied) Expansion Joints, Limit/Tie Rods are provided to absorb pressure thrust and other external load such as pipe dead weight to prevent the bellow from extending in case of anchor failure. Such restrains are used where the equipment or adjacent structure cannot accommodate pressure thrust.

## UNIVERSAL JOINTS (TIED / UNTIED)

These joints consist of two flexible elements connected by centre pipe to accommodate deflection in any direction or plane i.e. Axial, Angular, and Lateral or in any combination. The amount of lateral defection is directly proportional to the amount of angulations of each flexible element and the length of the centre pipe. The universal joints can accommodate very large amount of lateral movement by providing long centre pipe to have a very low lateral spring force. In such case, thermal expansion and excessive weight of the long centre pipe has to taken into account. Restrained and Unrestrained conditions are same as Axial Joints.





## **GIMBAL JOINTS**

These joints are capable of absorbing angular motion in all planes. A pair of two hinges & pin or pivot whose axis are perpendicular to each other are connected to a floating gimbaled-ring which has a advantage of absorbing pressure-thrust, supporting the dead weight of the system, transmitting loads through the gimbaled structure, preventing torsion & reduce forces on system. Gimbal joints are widely used for complex piping systems where proper anchoring & guiding may not be feasible. These joints are used usually in pairs.