

## INTRODUCTION OF COMPANY

❖ We are India Flex Engineering pleased to introduce ourselves as one of the leading company for design and manufacturing of Metallic and Nonmetallic Expansion Joint, hoses and pressure vessel equipment in Ahmedabad – India, established in August 2010. India Flex Engineering is Partnership Firm and annual turnover is more than 2 Crore. India Flex Engineering committed to his client for batter service and technical support. We believe that internal & external customer satisfaction is achieved through a better management, quality of products, technical knowledge, experience and services that needs to continuous improvement of the system.

❖ India Flex Engineering has invested heavily in modern infrastructure, latest technology for Bellows Long Seam Welding and Hydro Forming, R & D and quality manpower that result in a product quality that more than meets the existing quality standards of national & international customer's, consultants and government sector.

### ❖ We are...

- I. We are a passionate people, process driven local business succeeding globally through entrepreneurial business units, that values our internal and external customers and suppliers.
- II. We combine engineering and process of industry knowledge, service, integrity and urgency with efficient systems.
- III. We plan and communicate aggressive but achievable targets and turn them into actions. Our metrics are visible and monitored consistently at all levels with continues improvement.
- IV. We provide our people with clear objectives and support them with the necessary resources, holding individuals accountable and recognizing success whilst also managing poor performance.
- V. We strive for zero harm amongst our people and those around our business, and act responsibly within our communities.

..... this is the way we deliver superior returns to our shareholders.

### ❖ We can.....

- I. We can do all the uncomplicated and complicates jobs in a field for any time.
- II. We have the solution for each difficulty in the engineering filed.

## GENERAL INFORMATION OF ORGANIZATION

- ❖ Name of Company - INDIA FLEX ENGINEERING
- ❖ Nature of Activity - Design and Manufacturing of Metallic & Non-metallic Expansion Joints and General Fabrication Work including Pressure Vessel.
- ❖ Establishment Year - Since August 2010.
- ❖ Category of Enterprise - Small Scale Industries.
- ❖ SSI Part II No - 24-007-12-39488 Issued Date 19/04/2012. 
- ❖ VAT/CST No - VAT No - 24075105965 & CST No - 245751065 Dated 26/05/2010.
- ❖ PAN CARD No - AADFI 0376 A Dated 01/04/2010.
- ❖ Excise No - AADFI 0376 AEM 001 Div III Range V Dated 20/03/2013.
- ❖ IEC No - 0810009269 Issued date 20/07/2010 from Ahmedabad.
- ❖ Location of Company - Plot No - 439, Road No - 11, Phase - II, Kathwada GIDC, Kathwada, Odhav-Kathlall Road - Ahmedabad - 392430 - INDIA.
- ❖ Contact Details - Tele. +91 79 229010 Email - indiaflex@yahoo.co.in
- ❖ Contact Person - Mr. Kalpesh Patel (+91 9099 809920) (knpatel@indiaflex.com)  
Mr. UpendraPatel (+91 9879 729214) (uvpatel@indiaflex.com)

## HISTORY OF COMPANY

### ❖ Year 2009

- Think about India Flex and prepare the design software and drawing for manufacturing machinery for Expansion Joint.

### ❖ Year 2010

- Officially register as Partnership Firm with SSI unit in June 2010 at Ahmedabad – INDIA. Started production of Expansion Joint on October 2010.

### ❖ Year 2011

- Up to March 2011 achieve the turn over 10Lacs.
- Register with NSIC – D&B – SMERA performance & Credit Rating.

### ❖ Year 2012

- Up to March 2012 achieve the turn over **97 Lacs.**
- Acquired ISO 9001:2008 Through TUV NORD.

### ❖ Year 2013

- Up to March 2013 achieve the turn over **107 Lacs.**
- Apply Vendor approval for Gujarat Water Supply & Sewerage Board (GWSSB).

### ❖ Year 2014

- Up to March 2014 achieve the turn over **276 Lacs.**
- Acquired the approval in SABIC.
- Apply the workshop approval under Indian Boiler Regulation (IBR).

### ❖ Year 2015

- Acquired the work shop approval under Indian Boiler Regulation (IBR).

## QUALITY ASSUARANCE & OBJECTIVE

- ❖ We have adopted quality management in our organization and our mission is to deliver products and services to the utmost satisfaction and expectation of our customers. This is achieved by continuous improvement and enhancement of our activities and systems at all level. We also get an **ISO 9001:2008** certificate in India Flex Engineering . We are committed to being a customer's oriented organization where quality is the inspiration and innovation on the way ahead. We also believe this no compromise in quality and therefore accuracy in products, response and service after sales is the essence of our being.
- ❖ Today IFE have experienced and dynamic young quality personnel with a mission to assure best quality product and service after sales to the utmost satisfaction and expectation of customers. Quality Assurance is achieved through continuous improvement & enhancement of our activities and application for modern system at all level.
- ❖ To maintain better position as internal manufacturing and supplier of quality product.
- ❖ To conforming the relevant specifications and to build a high level of customer confidence and satisfaction
- ❖ To continual improvement of the quality system...

## DESIGN & SERVICES

- ❖ Design and calculation as per EJMA 9th Edition, ASME 2010/2013 SEC VIII DIV I Appendix 26 for Metallic Expansion Joints.

REINFORCED BELLOWS - EJMA			
<b>Prime Data</b>			
Nominal Bore in mm [NB] :	588.00	Lateral deflection in mm [Z] :	0.00
ID of Bellow in mm [Db] :	588.00	Lateral deflection in mm [Y] :	0.00
Convolution Height in mm [w] :	49.80	Angular Rotation in degree [θ] :	0.00
Thickness of the Material in mm [t] :	2.50	Material Code [Mc] :	SA 240 GR 316L
Convolution Pitch in mm [q] :	55.00	Temperature in Celsius [Tm] :	395.00
Number of Plies [n] :	1.00	Is It Dual Bellows :	<input checked="" type="radio"/> Yes <input type="radio"/> No
Number of Convolutions [N] :	3.00	Distance Between Outermost end of the Convolution in mm [Lu] :	0.00
Pressure in Mpa <input checked="" type="radio"/> Internal <input type="radio"/> External [Pd] :	4.44	Is it a Special Bellows :	<input checked="" type="radio"/> Yes <input type="radio"/> No
Axial Movement in mm [Extm] :	12.00	Reinforce Members :	<input checked="" type="radio"/> Fastener <input type="radio"/> Integral
Axial Movement in mm [Comp] :	0.00	Reinforce Type :	<input checked="" type="radio"/> Ring <input type="radio"/> Equalizing
Is It Torque Transmitting Bellows :	<input checked="" type="radio"/> Yes <input type="radio"/> No		<input checked="" type="radio"/> e(cal) <input type="radio"/> e(rated) <input type="radio"/> e(max)
Cross Sectional metal area in mm <sup>2</sup> [Ar] :		750.00	
<b>To Calculate S1, S1', S1''</b>			
Collar Length in mm [Lc] :	25.00	Collar Thickness in mm [Lt] :	22.00
No. of equally spaced gussets [ng] :	8.00	Section Modulus of Axis in mm <sup>3</sup> [Zc] :	42000.00
<b>Vibration For Single Bellows</b>			
Cn for Axial Vibration :	0.00	Cn for Lateral Vibration :	0.00
Value of W(Kg) :	0.00		
<b>To calculate S2'' [Fasteners]</b>			
Effec. length of Fastener in mm [Lf] :	100.00	Cross sect. metal area in mm <sup>2</sup> [At] :	560.00
<b>Result</b>			
Nc :	11,104.00 Cycles	S1 :	86.88 Mpa
Psc :	78.65 Mpa	S1' :	94.24 Mpa
Fir :	41,328.27 N/mm	S1'' :	20.27 Mpa
Fir1 :	13,776.09 N/mm	S2 :	89.79 Mpa
LSR :	0.00 N/mm	S2' :	78.84 Mpa
ASR :	0.00 Nm/Deg	S2'' :	99.46 Mpa
ASRL :	0.00 Nm	S3 :	26.23 Mpa
Ae :	322,000.75 mm <sup>2</sup>	S4 :	224.88 Mpa
TC :	2,160.16 mm	S5 :	36.51 Mpa
LDC :	165.00 mm	S6 :	1,514.21 Mpa
MPc :	131.01 mm	Tot Stress :	1,726.50 Mpa
Axial Fn :		0.00 hertz	Wt :
Lateral Fn :		0.00 hertz	HFp :
Rock Fn :		0.00 hertz	Angle of Twist :
<b>Table Value</b>			Ss :
Cp :	0.62		0.00 Mpa
Cd :	1.85		
Cf :	1.66		<b>Factors</b>
Sy :	101.00 Mpa		q1 :
Sab :	91.40 Mpa		0.55
Eb :	169,300.00 Mpa		q2 :
Eb1 :	195,000.00 Mpa		0.64
			Lb/Db :
			0.28
<b>Options</b>			
<input checked="" type="button" value="Calculate"/> <input type="button" value="Table"/> <input type="button" value="Report"/> <input type="button" value="Close"/>			

- ❖ Design and Selection of Material as per Fluid Sealing Association (FSA) standard for Non-metallic Expansion Joints.
- ❖ Design and calculation as per ASME 2010/2013 SEC VIII DIV I for General Fabrication and Pressure Vessel equipment.
- ❖ Solving and Recommendation of piping Application of Expansion Joints.
- ❖ Emergency Repair, Breakdown, Clam Shell Bellows and Reconditioning of Expansion Joints.
- ❖ Site Visit and Serve report for Expansion Joints.

## LIST OF KEY MACHINERY WITH CA PACITY

- ❖ Shearing Machine - 0.3mm to 3mmT X 1500mm Width (Nantong Reliant Co. Ltd - China)
- ❖ Sheet Rolling Machine - 0.3mm to 1.6mmT X 1000mm Width (AKBEND - Germany)
- ❖ Plate Rolling Machine - 1.2mmT to 6mmT X 1500mm Width (Nantong Reliant Co. Ltd - China)
- ❖ Plate Bending Machine - 6mmT to 25mmT X 3000mm Width (By Self - India)
- ❖ Plate Bending Machine - 16mmT to 55mmT X 3000mm Width (By Self - India)
- ❖ Automatic Long Seam Welding Machine - 0.3mmT To 3mmT X 1500mm Width (By Self - India)
- ❖ Hydro Forming Machine - 50NB to 900NB - 200 Ton Capacity (By Self - India)
- ❖ Semi Automatic Punch Forming Machine - 650NB to 7000NB - 200Ton Capacity (By Self - India)
- ❖ Re-rolling Machine - 200NB to 7000NB - (By Self - India)
- ❖ Press Machine - 200Ton Capacity - (By Self - India)
- ❖ Press Machine - 800Ton Capacity - (By Self - India)
- ❖ CNC Oxy-Cut Machine - Up to 150mmT (China)
- ❖ Hydro Testing Pump - Up to 280Bar (Maximator - Germany)
- ❖ TIG/ELECTRIC/MIG Welding Machine - Up to 400Amp (D&H, Warp, Essab and BTH)
- ❖ Welding Electrode Oven - 50 to 400 Deg Cen - 50Kg (Heat & Control System - India)
- ❖ Air Compressor - 10Bar Pressure - (Indo Air Compressor - India)
- ❖ Radial Drilling Machine - Up to 32mm Dia (Rajkot - India)
- ❖ Splicing Iron - Up to 400 Deg Cen (Eewa Engineering - India)
- ❖ Air Plasma Cutting Machine - Up to 25mmT S.S. (Accurate - India)



## MANUFACTURING & TESTING CAPACITY

- ❖ **Pressure Range** - Full Vacuum up to positive pressure at 300Bar.
- ❖ **Temperature Range** - Minus 165Deg Cen to 1400Deg Cen.
- ❖ **Movement Range** - Any of movement subject to service condition and overall length(OAL).
- ❖ **Vibration** - Low to high frequency and low amplitude.
- ❖ **Hydro Forming** - Hydro Forming 50NB to 900NB (Unreinforced, Reinforced & Toroidal)
- ❖ **Semi Automatic Punch Forming** – 650NB to 7000NB. (Unreinforced and Reinforced)
- ❖ **Square and Rectangular Forming** - Up to 6mmT any Shape and Size for square and rectangular.
- ❖ **Non-metallic** - Fabric and Rubber Bellows for any size and shape.
- ❖ **Pressure Vessel & General Fabrication** - Up to 38mmt any shape and size.
- ❖ **Material** -
  - I. Austenitic Grade (SA 240 GR 304,304L,304H,310S,310H316,316L,316H,316Ti,321,904L & 309S).
  - II. Duplex (SAF 2205 UNS S31803, 253MA UNS S30815 ect..)
  - III. Nickel Alloy (Inconel/Incolloy-600,601,625(UNS N06600,6601,6625) 800,800HT,825, N0880,8810.8811,8825).
  - IV. Nickel-Copper Alloy (Monel) – UNS N04400.
  - V. Titanium GR 1.
  - VI. Carbon Steel / Mild Steel.
- ❖ **Testing** -
  - 1. Non Destructive Testing
    - 1) Radiography Test Examination
    - 2) Liquid Penetrant Test Examination
    - 3) Magnetic Particle Test Examination
    - 4) Ultrasonic Test Examination
    - 5) Air Jet Leak Test Examination
    - 6) Pressure Test Examination (Hydro or Pneumatic Test)
  - 2. Destructive Testing
    - a) Fatigue Cyclic Life Test
    - b) Squirm Test
    - c) Meridional Yield Rupture Test

## OUR GROUP OF COMPANY

- ❖ ROLEX INDUSTRIES (Heavy Machine Shop)

[www.rolexind.com](http://www.rolexind.com)

- ❖ AMRUTA ENGINEERS

(Concrete Batching Plant & Canal Paver /Road Paver)

[www.amrutaengineers.net](http://www.amrutaengineers.net)

- ❖ ANKUR ENGINEERS (Construction Machinery Spares)

[www.ankurengineers.com](http://www.ankurengineers.com)

- ❖ AAKASH METAL INDUSTRIES (Non-ferrous Foundry)

[www.aakashmetal.com](http://www.aakashmetal.com)

- ❖ ROYAL STEEL INDIA (Heavy Fabrication Shop)

[www.royalsteelindia.net](http://www.royalsteelindia.net)



## PHOTOS FOR FINISH PRODUCTS

### ❖ Unreinforced Metallic Expansion Joints :-

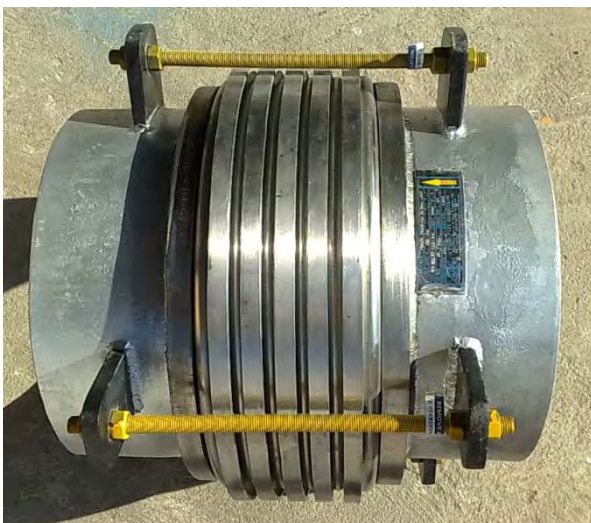








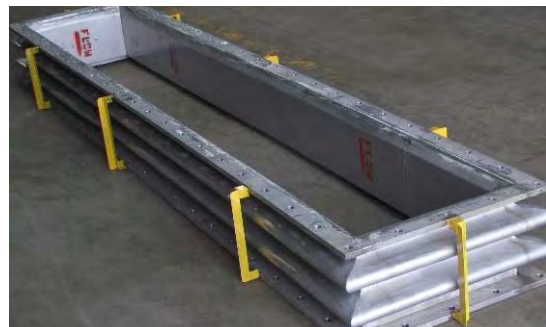
## ❖ Reinforced and Toroidal Expansion Joints :-







## ❖ Square and Rectangular Expansion Joints :-



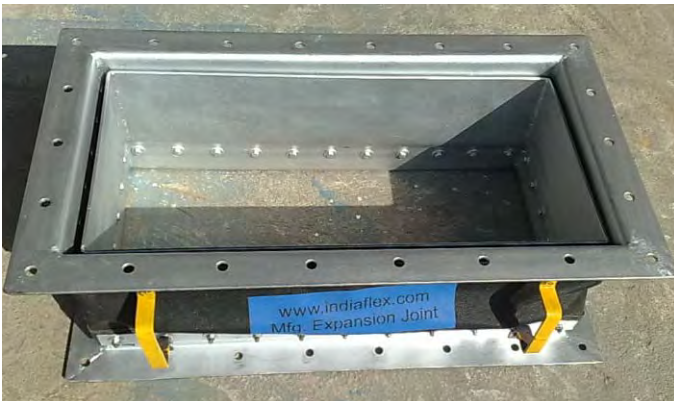




## ❖ Non-metallic Expansion Joints :-









## ❖ Thick Wall Expansion Joints :-





## ❖ Pressure Vessel Equipments :-



## OUR CLIENTS





# INDIA FLEX ENGINEERING

MANUFACTURER OF EXPANSION JOINT & PRESSURE VESSEL

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Gujarat Heavy Chemicals Ltd.



Institute For Plasma Research

પ્લાઝ્મા અભ્યાસ સંસ્થાન



કૃષ્ણકો શ્યામ ફર્ટિલાઇઝર્સ લિમિટેડ  
KRIBHCO SHYAM FERTILIZERS LIMITED



Rexroth  
Bosch Group

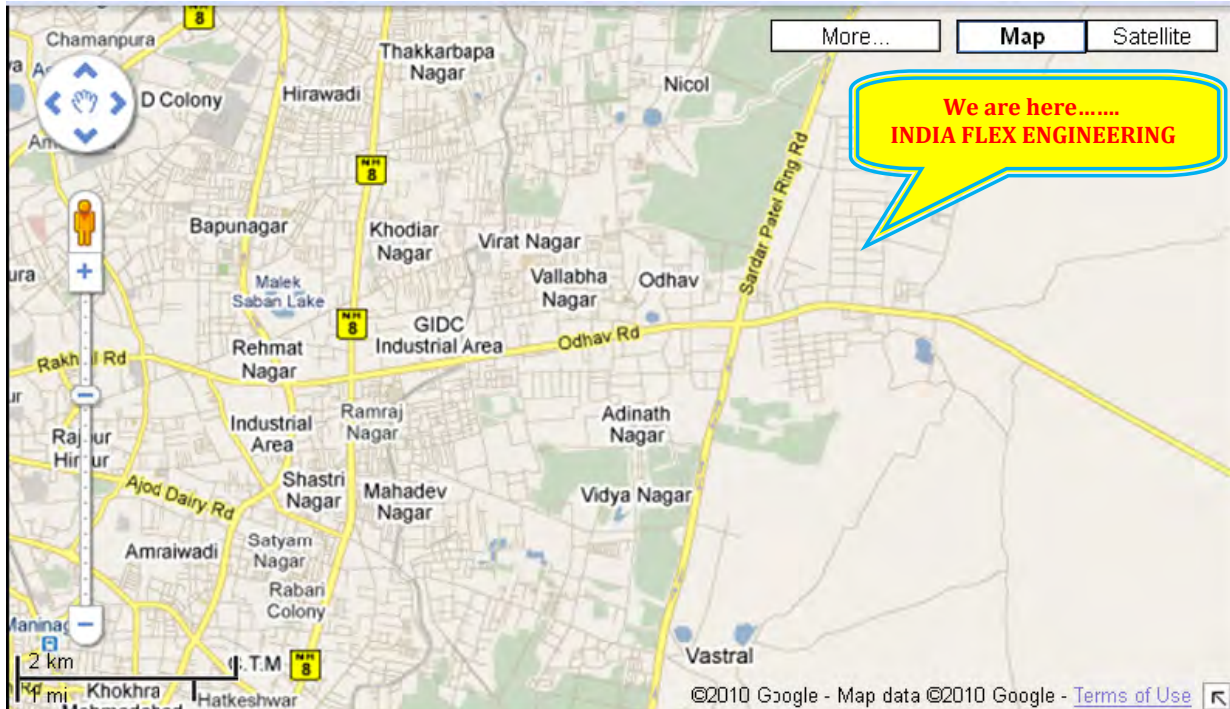


GAETEC

ESSAR  
ESSAR STEEL LTD.

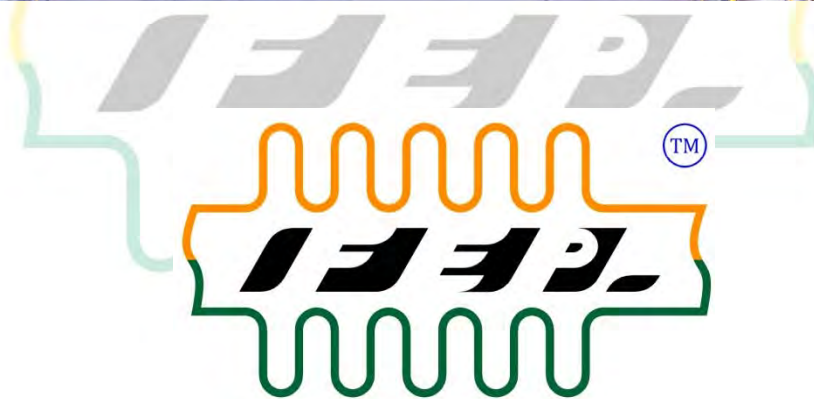


WE ARE HERE .....



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