



SHOCK TUNNEL SYSTEMS & HIGH PRESSURE CHAMBERS

Shridhan Automation, a 35 year old organisation, has pioneered in the field of liquid level automation. Over the last 3 decades, we have catered to various fabrication requirements in different disciplines of R&D. Particularly, we have mastered the field of design for shock-tubes, shock tunnels, high pressure vessels, pressure chambers, used in various R&D and educational institutions.

We offer services ranging from design through commissioning depending on customers' requirement. Our team of trained engineers and highly skilled workforce are capable of, understanding the complexities of the application, design and execute the job to suit customers' needs. We have our presence across the globe, for all our products and services.

We at Shridhan firmly believes that the pursuit of continuous customer satisfaction starts with careful understanding of requirement, continuous innovation and providing to quality products and solutions.

SCOPE AND EXPERTISE

- Total solutions in storage vessels - from design till commissioning
- Experience in design and manufacture as per various design codes (ASME, IS etc.)
- Vast experience in handling of different kind of metals & engineering plastics
 - Carbon Steel
 - Austenitic stainless Steel (various grades)
 - Duplex & Super Duplex
 - Nickel alloys like Incoloy (various grades) & Monel (various grades)
 - Titanium
 - Polyvinyl Chloride (PVC)
 - Polypropylene (PP)
 - Polytetrafluorethylene (PTFE)
 - High Density Polyethylene (HDPE)
 - Polyvinylidene Fluoride (PVDF)
 - Ultra-high-molecular-weight polyethylene (UHMW - PE)
- Material handling capability of up to 5 tons
- Ability to cater to services with operational conditions ranging from full vacuum to 350kg/cm² [pressure] and -40 °C TO 450 °C [temperature]
- Ability to execute welding jobs by qualified welders as per ASME Section IX of the BPVC & NDT testing facilities

SCOPE:

Design, Fabrication, Testing & Supply
Supply Year: January - 2021

SPECIFICATIONS:

Orientation: Horizontal Shock Tunnel

1. Dump Tank:

- Size: 400mm square x 800mm Long.
- MOC: Mild steel.
- Hydro Test Pressure: 5 bar.

2. Shocktube :

- Size: ID 81mm x OD 114mm x 3.4mm Long (In multiple sections).
- MOC: SS 304.
- Hydro Test Pressure: 100 bar .
- Concentricity / Straightness : $30\mu\text{m} - 40\mu\text{m}$.

3. Other Accessories :

- BK7 viewing glass.
- Sample Mounting.
- Structural steel mounting stands for dump tank and shocktube.



SCOPE:

Design, Fabrication, Testing, Supply & Commissioning

Commissioned year: November 2016

SPECIFICATIONS:

Orientation: Horizontal Shock Tunnel

1. Shocktube :

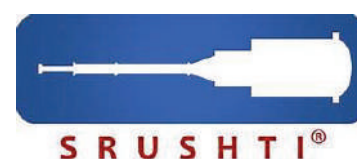
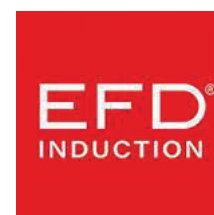
- Size: ID 23mm x 1000mm Long (In multiple sections).
- MOC: SS 316L.
- Hydro Test Pressure: 350 bar.

2. Other Accessories :

- Structural steel mounting stands for dump tank and shocktube.
- Under - ground level sample mounting provision with structure.
- Multipoint sample loading area.
- SS316L structure (multi-storey) for access of shocktube.



OUR CLIENTELE BASE



SCOPE:

Design, Fabrication, Testing, Supply & Commissioning

Commissioned Year: September - 2013

SPECIFICATIONS:

Orientation: Vertical Shock Tunnel

1.Dump Tank:

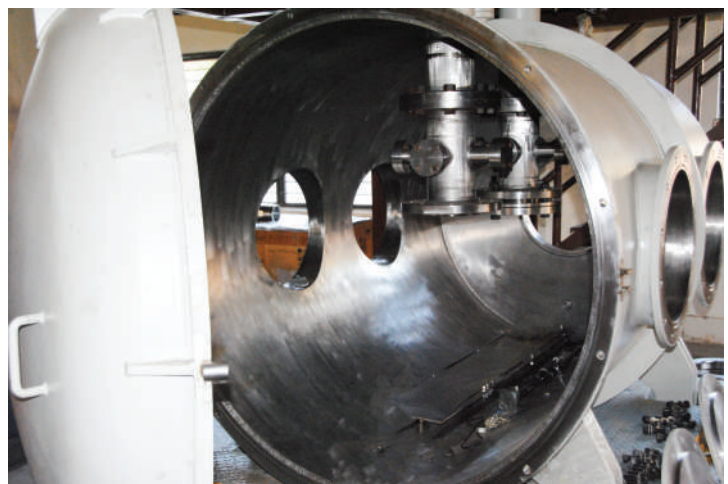
- Size: \varnothing 1350mm x 3000mm Long.
- MOC: SS 304.
- Hydro Test Pressure: 10 bar.

2.Shock Tube:

- Size: ID 132mm x OD 168.3mm x 5.5 m Long (in multiple sections).
- MOC: SS 304.
- Hydro Test Pressure: 200 bar.
- Concentricity / Straightness: $30\mu\text{m} - 40\mu\text{m}$.

3.Other Accessories:

- Nozzle Ports (To mount auxiliary sensors).
- Pressure transmitters and indicators (Digital) for high pressures and vacuum (Measuring Range: 0 – 250 bar).
- Multi- story steel structure to access different parts of shocktube.
- Floating diaphragm station.
- BK7 viewing glass.
- Electrical Overhead Chain Hoist (1 Ton SWL) provided to facilitate ease of handling.
- Sample monting provision - inside the dump tank.



SCOPE:

Design, Fabrication, Testing, Supply & Commissioning

Commissioned Year: December - 2015

SPECIFICATIONS:

Orientation: Horizontal Shock Tunnel

1. Dump Tank:

- Size: \varnothing 1000mm x 1500mm Long.
- MOC: SS 304.
- Hydro Test Pressure: 10 bar.

2. Shock Tube:

- Size: ID 100mm x OD 124mm x 11.5 m Long (in multiple sections).
- MOC: SS 304.
- Hydro Test Pressure: 150 bar.
- Concentricity / Straightness: $30\mu\text{m} - 40\mu\text{m}$.

3. Other Accessories:

- Pressure transmitters and indicators (Digital) for high pressures and vacuum (Measuring Range: 0 – 250 bar).
- Load bearing stands in structural steel for ease of shocktube operations and mounting.
- Floating diaphragm station.
- BK7 viewing glass.
- Sample mounting provision - inside the dump tank.
- Auxiliary connection provision on dump tank and shock tube.



SCOPE:

Design, Fabrication, Testing, Supply & Commissioning

Commissioned Year: July - 2021

SPECIFICATIONS:

Orientation: Vertical shock Tunnel

1. Dump Tank:

- Size: 1200mm Square x 1500mm Long.
- MOC: SS 304.
- Hydro Test Pressure: 05 bar.

2. Shocktube

- Size: ID 195mm x OD 219.1mm x 3.5 m Long (in multiple sections).
- MOC: SS 304.
- Hydro Test Pressure: 70 bar.
- Concentricity / Straightness: $30\mu\text{m} - 40\mu\text{m}$.



3. Other Accessories:

- Mild Steel Vertical Support Structure, multi- story steel structure to access different parts of shocktube .
- Pressure sensors (Measuring Range: 0 – 100 bar).
- BK7 Sight Glass on Dump Tank to provide visual access & aid cameras for data capturing.
- Electrical Overhead Chain Hoist Crane (1 Ton SWL) provided to facilitate ease of handling.
- Mounting trolleys for Dump Tank.

SCOPE:

Design, Fabrication, Testing, Supply & Commissioning

Commissioned Year: July - 2021

SPECIFICATIONS:

Orientation: Horizontal shock Tunnel

1. Dump Tank:

- Size: \varnothing 1250mm x 1500mm Long (Split design).
- MOC: SS 304.
- Hydro Test Pressure: 5 bar.

2. Shock Tube:

- Size: ID 292mm x OD 324mm x 10.8 m Long (in multiple sections).
- MOC: SS 304.
- Hydro Test Pressure: 70 bar.
- Concentricity / Straightness: $30\mu\text{m} - 40\mu\text{m}$.



3. Other Accessories:

- Mild Steel pedestal arrangement to support horizontal shocktube.
- Pressure sensors (Measuring Range: 0 – 100 bar).
- BK7 Sight Glass on Dump Tank to provide visual access & aid cameras for data recording.
- Mounting trolleys for Dump Tank & Shocktube .
- Diaphragm Testing Rig.
- A-Frame crane with Hand Operated Chain Hoist (1.5 Ton SWL) crane.

SCOPE:

Design, Fabrication, Testing, Supply & Commissioning

Commissioned Year: March - 2014

SPECIFICATIONS:

Orientation: Horizontal Shocktube

1. Shock Tube:

- Size: ID 60 x OD 88.9mm x 12.8mm Long (in multiple sections).
- MOC: SS 316L.
- Hydro Test Pressure: 250 bar.
- Concentricity / Straightness: 30μ/m – 40μ/m.

2. Other Accessories:

- Mild Steel Roller Support (200 kg Load bearing Capacity).
- Nozzle Ports (To mount auxiliary sensors).



High-Pressure Chamber- INDIAN INSTITUTE OF TECHNOLOGY- THIRUPATHI.

SCOPE:

Design, Fabrication, Testing & Supply

Supplied year: October - 2020

SPECIFICATIONS:

- High Pressure Chamber.
- Size: Dia 320 X 395mm Long in assembled condition.
- MOC: SS 304.
- Hydro Test Pressure: 100 bar(Held for 20 mins).

2. Other Accessories:

- Mild Steel support stand (350 kg load bearing capacity).



SCOPE:

Design, Fabrication, Testing & Supply

Supply Year: March - 2020

SPECIFICATIONS:

Orientation: Horizontal Shock Tunnel

1. Dump Tank:

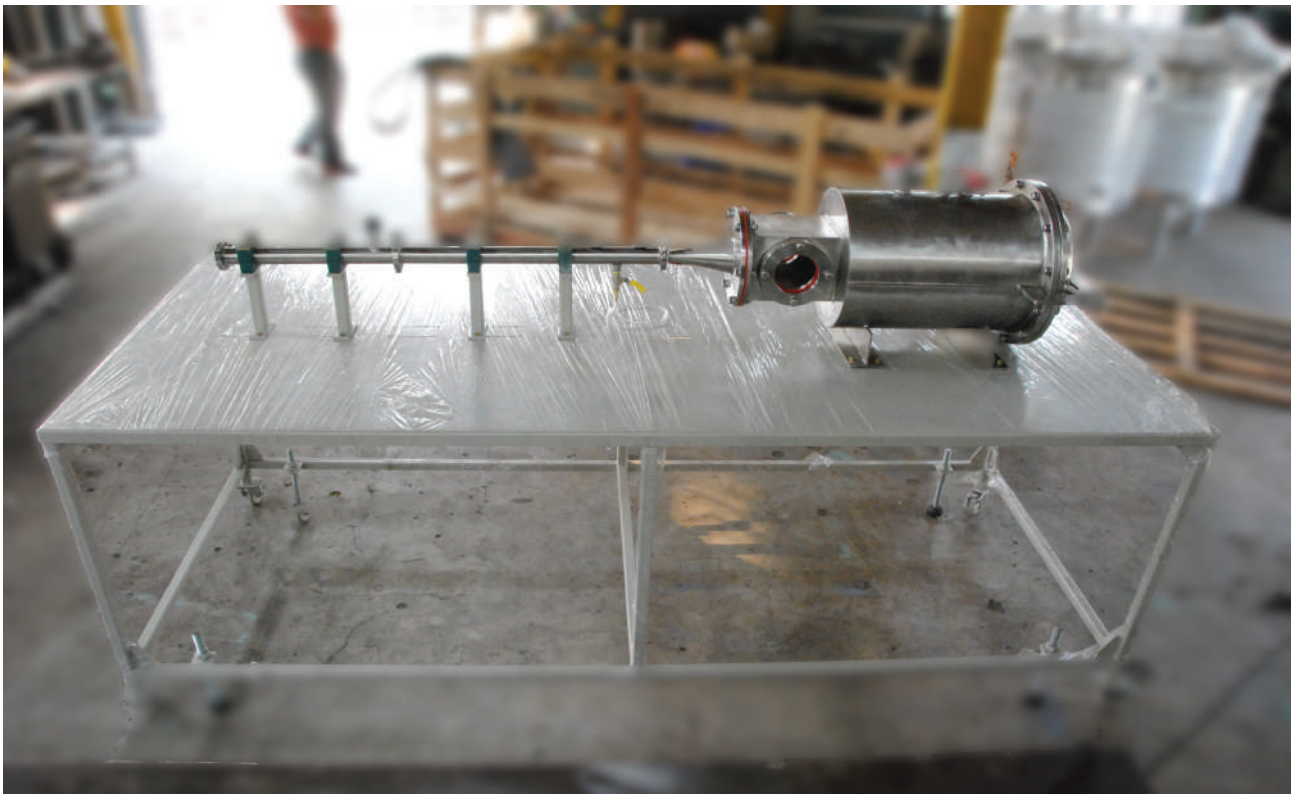
- Size: Ø 350mm x 425mm Long.
- MOC: SS 304.
- Hydro Test Pressure: 5 bar.

2. Shocktube :

- Size: ID 29.5mm x OD 42.16mm x 1000mm Long (In multiple sections).
- MOC: SS 304.
- Hydro Test Pressure: 25 bar .
- Concentricity / Straightness : 30µ/m – 40µ/m.

3. Other Accessories :

- BK7 viewing glass.
- Sample Mounting.
- MS foldable table with support stand.
- Plunger arrangement for shocktube.



HQ and Manufacturing - 1

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