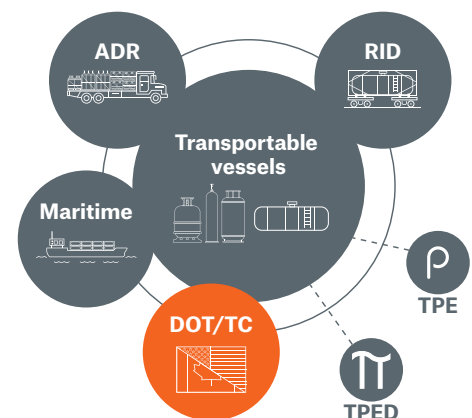


Manufacturing of DOT/TC:

Cylinders, UN Portables, Cargo Tanks, and MEGCs

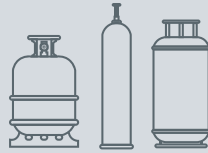
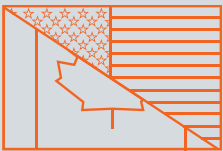


The safety standards developed by the Department of Transportation (DOT) and Transport Canada (TC) are utilized globally for the construction of cylinders for the containment of various gases, cryogenic liquids, and hazardous chemical material. Engagement of the DOT/TC approval process is required for importing to the US or Canada and allows the manufacturer to set a high level of consistent quality for the fabrication of cylinders.



HSB is here to support your business

HSB is a recognized authority to apply 49 CFR for U.S. DOT and Transport Canada CSA requirements.



Cylinder Manufacturers importing into the United States require inspection by an approved Independent Inspection Agency (IIA). HSB is approved to witness and verify tests, inspections, verifications, and certification pertaining to manufacturing of compressed gas cylinders and UN/ISO receptacles. Transport Canada(TC) requires inspection by an Independent Inspection Agency(IIA) for all cylinder manufacturers outside of Canada.



UN Portable and Cargo Tank manufacturers can lean on HSB to perform design review and certification of their design to regulatory requirements or a specific design specification. HSB is authorized to perform new fabrication inspections and testing, inspection and testing of repaired tanks, periodic in-service inspection (internal and external visual inspection), leakage and pressure tests, thickness tests, and lining inspections.



MEGC manufacturers can utilize HSB's decades of experience and Designated Approval Agency(DAA) status to approve design, witness prototype testing, and perform inspections/ongoing testing required by the regulation.

Government organizations that regulate the transport of hazardous material:

- **US DOT Pipeline and Hazardous Materials Safety Administration (PHMSA)**, regulates the transport of hazardous materials within the United States.
- **The Transport Canada Transportation of Dangerous Goods Directorate**, regulates the transport of dangerous goods within Canada.
- **International Convention of Safe Container (CSC)** approval through the U.S. Coast Guard, formalizes the international safety requirements for structural design and consistent inspection/maintenance of cargo containers. *HSB supports requirements through their CSC code HB.*

Why HSB? We add value to your business.

- HSB has over 30 years' experience working with regulatory bodies and supporting manufacturers.
- HSB specializes in the pressure vessel industry globally and is not only the preferred service provider around the world, but also held in high esteem because of our ethical approach and integrity. We support many manufacturers globally with our local staff located in over 20 countries.
- HSB's inspection staff are National Board Commissioned/Authorized Inspectors with designation and experience working with many global standards. They are specialists in pressure vessel manufacturing, quality process oversight, and compliance to regulatory requirements.
- HSB inspection and support staff is continuously trained to expand their core knowledge and expertise.
- We maintain a strong working relationship and mutual respect with the U.S. DOT and TC regulatory authorities providing updates and requesting revisions affecting the cylinder and pressure vessel industry.

HSB DOT/TC cylinder approval process



Design review and Quality Program review can be completed simultaneously

- HSB Engineer performs design review and provides Customer Design Recommendation Letter.
- HSB's Technical Manager reviews Manufacturer's QA Program and develops Pre-Survey Checklist.



Pre-survey performed by HSB

HSB will issue a "Letter of Recommendation" for the Manufacturer's DOT/TC application once the following have been completed. 1) HSB's Design Recommendation Letter, 2) Prototype Testing witness (if required), and 3) Acceptable Pre-Survey by HSB.



Application

The manufacturer submits application to DOT/TC along with HSB Letter of Recommendation.



DOT/TC fitness inspection - DOT auditor visits manufacturer

DOT/TC will conduct an on-site audit (Fitness inspection) at the Manufacturer's location. HSB is required to attend. If the on-site audit is acceptable, DOT/TC will issue approval letter to both HSB and the Manufacturer.



Ongoing Inspections

HSB performs inspections as required per the Inspection Procedure. HSB is required to provide a six-month Production Report of the cylinders manufactured to DOT.

Want your cylinder product in the United States or Canada?

HSB is designated an Independent Inspection Agency (IIA) by the U.S. DOT and Transport Canada (TC) under identification number IA08. HSB is authorized to certify your facility, perform manufacturing inspection, and provide technical guidance of DOT, TC, and UN/ISO cylinders manufactured in accordance with 49 CFR, Part 178, CSA B339, and Special Permits.

Want to Retest and Re-qualify Cylinders (RIN)?

HSB, under their IIA approval, is authorized for approval of cylinder re-qualifiers, repairers, and rebuilders of DOT specification, UN/ISO, and Special Permit compressed gas cylinders.

UN portable, Cargo tanks or MEGCs?

HSB is a Designated Approval Agency (DAA) by the U.S. DOT under identification number IA-9601 and Approval Number CA2003040001 for new manufacturing, testing, and periodic inspections. HSB also provides support for Part 6.7 of IMDG code.



Summary of services for Department of Transportation and Transport Canada

| Department of Transportation (DOT)/MEGCs | Transport Canada (TC) |
|---|---|
| DOT Design Review | TC Design Review |
| DOT Prototype Review | TC Prototype Review |
| Technical Assistance | Technical Assistance |
| New Manufacturer Preparation for Pre-Survey | New Manufacturer Preparation for Pre-Survey |
| Pre-Survey | Pre-Survey |
| Fitness Inspections | Fitness Inspections |
| Cylinder Inspections | Cylinder Inspections |
| Retesting/Requalification Approval | Retesting/Requalification Approval |

Industries

Chemical | Petrochemical | Pharmaceutical | Utility | OEMs

For more information:
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