LPG TT Road Accident at Hoshiarpur : 22/08/2025

TANKER DETAILS

Tank lorry No	PB13AF9933
Date of REGISTRATION	13-Feb-14
Engine No	EDPZ100690
Chassis No	MB1TLDWB7EPDJ5845
Validity of Road Tax PERMIT	12-Feb-26
Validity of Vehicle Fitness Certificate	17-Dec-25
Vehicle Insurance Validity	28-Jan-26
DATE OF MANUFACTERING OF VESSEL	21-Jun-05
Manufacturer of Vessel & Sr. No.	M/s Friends Industry, Baroda, FI/98/016
Details of SRV	S-38206 & S-38207,Manufact - M/s Anil Engg Date of Manufacturing - 20-April-2018
Details of IEFCV	LP15417, LP15454 & LP13983 - (Make-Emerson, Mfg. Date - Liquid IEFCVs -30-01-2014, Vapour - 03-01-2014)
PESO License No for LPG Tank Lorry	S/NC/PB/04/400 (S59248)
Validity of PESO License	29-Mar-26
Last Hydrotest Date of Tank Lorry Vessel	13-07-2023
Last check of SRV & IEFCV of Vessel	05-07-2025

INCIDENT



- Post collision, the **entire pipeline manifold along with the IEFCV fell off** from the tank lorry

- This resulted in an **uncontrolled release of entire LPG due to which vapour cloud formed and resulted in fire**

Accident Analysis

Due to heavy impact

1. TT's lateral under run protection & valve box was damaged (these are not designed for such direct heavy impact)
2. All 3 valves got dislodged from threaded joint and fell down along with IEFCV
3. Full LPG (17.55 MT) got released





Leaked LPG vapour caught fire and spread to nearby houses and shops along the highway

7 deaths and around 16 people got burn injuries.

Fire brigade teams reached the site in 20 minutes and brought the fire under control

HPC Plant and Regional Office teams, along with the district administration, helped in fire fighting

Findings

1. The design of the Internal Excess Flow Check Valve (IEFCV) consists of a threaded check valve portion fitted inside the TT pressure vessel. In the event of an impact, the valve is expected to shear at the designated weak point, with the check valve portion remaining inside the vessel to prevent LPG leakage. In this incident, the direct heavy impact led to the pull-out of all three valves with their IEFCVs at the threaded joint.
2. This indicates that either the threaded joint was weaker than the shear point or the improper fitting of the IEFCV. Additionally, there appears to be no mechanism for cross-verification of the integrity of these threads, which is a critical aspect that needs attention in preventing such failures.
3. Degassing of the TT and certificate of test of IEFCVs and SRVs of the TT have been issued by M/s Yadav Gastech Pvt. Ltd. The competent person had a valid license ref PV(R) 167/CPS54378, valid up to 29 Dec 2025. Transporter informed that he or his representatives were not present at the time testing of SRVs and IEFCV.
4. TT's lateral under run protection guards got smashed. It is evident that these are not designed for such a heavy impact. These guards are to avoid low-intensity impacts of the vehicles running beside the TTs, which may come towards/underneath the TT

Root Cause of the Incident

a) The incident occurred due to the TT being hit by an oncoming vehicle leading to damage to the valves, leakage and consequent fire.

b) The IEFCV did not shear at the designed shear point. There is a likelihood of improper fitment of the IEFCV.

c) Due to this, instead of shearing, the impact resulted in the IEFCV, pipelines and associated valves getting pulled out of the threaded joint.

IEFCV Analysis







1. The vessel threaded entries for fitting the “Internal excess flow check valve” (IEFCV) of liquid and vapour pipelines were corroded.
2. The female threads of the tank truck bung are worn.
3. The rust seen at inner threads indicates that outer 4-5 threads only were engaged.
4. The IEFCV threads are also worn out.

The design, fitting, and testing mechanism of IEFCVs are to be taken under review by the industry.

Checking of IEFCV



IEFCV numbers – LP 15417 & LP15454 and LP13983 :

1. Design 400 psi, Flow 150 GPM and 80 GPM
2. PNGRB LPG T4S Regulations, clause 3.2.8.2:
   a) IEFCVs to be replaced in 10 years, Annual Testing to be done

The 2 IEFCV's of liquid (LP15417, LP15454) and Vapour IEFCV (LP13983) were tested on 05-07-2025 by Yadav Gastech Private Ltd, Address: Plot No. 36/11/2, Kulana-Ahri Road, Koka, Jhajjar, Haryana-124108.

As per SMPV Rules, Rule No. 18, Closing flow rate testing of excess flow valves / internal valves shall be done during the periodic hydraulic test and as per PNGRB LPG T4S Regulations, clause 3.2.8.2, IEFCV shall be checked for its rated capacity every five years. This was done on 13.07.2023.

Accidents where IEFCV worked



THE IEFCV HAS PROVED TO BE EFFECTIVE IN MANY SUCH ACCIDENT CASES





IS 14682 : 2014

Indian Standard

AUTOMOTIVE VEHICLES — LATERAL PROTECTION (SIDE GUARDS) — TECHNICAL REQUIREMENTS

(First Revision)

1 SCOPE

1.1 This standard applies to the lateral protection of complete vehicles offered by categories M2, M3, N2, N3, T3 and T4 as defined in IS 14272 (Part 1).

1.2 This standard does not apply to :

- Tractors for semi-trailers,
- Trailers specially designed and constructed for the carriage of very long loads of indivisible length, such as timber, steel bars, etc, and
- Vehicles designed and constructed for special purpose where it is not possible, for practical reasons, to fit such lateral protection.

1.3 Purpose

Vehicles covered by this standard shall be so constructed and/or equipped as to offer effective protection to unprotected road users against risk of falling under the sides of the vehicle and being caught under the wheels.

3.2 Vehicle Type — Means a category of vehicles which do not differ with respect to the essential points such as the width of the rear axle, the overall width, the dimensions, the shape and the materials of the whole side of the vehicle (including the cab, if fitted) and the characteristics of the suspension in so far as they have a bearing on the requirements specified in **4** of the standard.

3.3 Unladen Vehicle — Means the vehicle in running order, unoccupied and unladen but complete with fuel, coolant, lubricant tools, spare wheel (if supplied by the vehicle manufacturer as standard equipment) and the fuel tank 90 percent full.

3.4 Unprotected Road Users — Means pedestrians, cyclists or motorcyclists using the road in such a way that they are liable to fall under the sides of the vehicle and be caught under the wheels.

4 REQUIREMENS

4.1 General

Thank You