

PETROLEUM AND NATURAL GAS REGULATORY BOARD

NOTIFICATION

New Delhi, the ..., 2019

F.No. PNGRB/Tech/2-T4SNGPL/(1)/2019. – In exercise of the powers conferred by section 61 of the Petroleum and Natural Gas Regulatory Board Act, 2006 (19 of 2006), the Petroleum and Natural Gas Regulatory Board hereby makes the following regulations further to amend the Petroleum and Natural Gas Regulatory Board (Technical Standards and Specifications including Safety Standards for Natural Gas Pipelines) Regulations, 2009, namely: -

1. Short title and commencement. -

(1) These regulations may be called the Petroleum and Natural Gas Regulatory Board (Technical Standards and Specifications including Safety Standards for Natural Gas Pipelines) Amendment Regulations, 2019.

(2) They shall come into force on the date of their publication in the Official Gazette.

2. In the Petroleum and Natural Gas Regulatory Board (Technical Standards and Specifications including Safety Standards for Natural Gas Pipelines) Regulations, 2009, -

(i) in Schedule-1A, under heading “MATERIAL SPECIFICATIONS”, under sub-heading “Steel Pipe”, after the words beginning with “as per Line Pipe Specification...” and ending with “...conforming to (PSL 2).”, the following clause shall be substituted, namely: -

“as per Line Pipe Specification API 5L, shall be Seamless, High Frequency Welded (HFW) including Electric Resistance Welded pipes or Longitudinal / Helical Submerged Arc Welded (SAWL/SAWH) conforming to (PSL 2).”;

(ii) in schedule –1C, after the heading “Steel Pipes “, under the heading “Plastic Pipes and Components” and before the sub-heading “LOCATON AND LAYOUT OF PIPELINE INSTALLATIONS”, the following sub-heading shall be added, namely: -

Transportation of Natural Gas in class 1 & 2 locations

PE pipes can be laid to transport natural gas including off spec gas etc. provided if meets the following requirements.

- a. The PE pipeline shall be laid complying with all the provisions of the PNGRB (Technical standards and specifications including safety standards for City or local gas distribution network) Regulations, 2008. These provisions inter alia include odourisation, route markers, warning mat etc.
- b. Quantitative risk analysis shall be carried out for the pipeline network and risk mitigation measures shall be taken accordingly to minimise the risk.
- c. The cover of 1.5 meter or the cover as specified in these Regulations for steel pipelines, whichever is higher shall be maintained.
- d. The pressure shall not exceed 7 Kg/cm² in the PE Pipeline Network.

- e. The material shall confirm to IS 14885 or ISO 4437 or ASTM D2513-14e1. The fittings shall as per ISO 8085 Part 3”;

(iii) in Schedule-1D, -

- (A) under heading “PIPELINE SYSTEM AND COMPONENT”, under sub-heading “Other requirements”, after the words beginning with “Fire & gas detectors shall be installed...” and ending with “...the event of occurrence of fire.”, the following clause shall be substituted, namely: -

“Fire & gas detectors or multi-sensor detectors shall be installed in the compressor buildings or compressors skids to initiate shut down of the unit, isolation of the compartment and release of clean agent / CO2 inside the unit in the event of occurrence of fire.”;

- (B) under heading “PIPELINE SYSTEM AND COMPONENT”, below “Table-2” the following shall be added, namely: -

“Note -

Block / Sectionalizing valves shall be provided at continuously accessible locations at interval distances mentioned in the table above based on predominant location class along the pipeline. Valve spacing adjustments should not exceed 10% of the applicable distance listed above to permit a valve to be installed in a more accessible location, with continuous accessibility being the primary consideration. However, the total number of valves as per the design requirement shall remain same.”;

(iv) in Schedule-1E, -

- (A) under the heading “Essential Features of the Emergency Plan”, after the words beginning with “The entity shall put...” and ending with “...case of an incident.”, the following shall be substituted, namely: -

“A comprehensive ERDMP shall be developed in accordance to the Petroleum and Natural Gas Regulatory Board (Codes of Practices for Emergency Response and Disaster Management Plan (ERDMP)) Regulations, 2010. The copies of the ERDMP for the pipeline and the station specific shall be maintained at each control room along with necessary maps and records to properly administer the plan, such as

- i. Necessary operational data
- ii. Pipeline patrolling records
- iii. Corrosion monitoring or survey records
- iv. Leak or tapping records
- v. Routine or unusual inspection records
- vi. Pipeline repair records”;

- (B) under the heading “Fire and Gas Detection System”, under sub-heading “Compressor stations:”, after the words beginning with “IR / Smoke detectors shall...” and ending with “...alarm and annunciation.”, the following shall be substituted, namely: -

“IR / Smoke detectors or Multi-sensor detectors shall be provided in control room, MCC, utility room and compressor enclosure with provision of indication, alarm and annunciation.”;

- (C) under the heading “Fire and Gas Detection System”, under sub-heading “Other Gas Installations:”, after the words beginning with “IR / Smoke detectors shall...” and ending with “...alarm and annunciation.”, the following shall be substituted, namely:

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“IR / Smoke detectors or Multi-sensor detectors shall be provided in control room, MCC, utility room and compressor enclosure with provision of indication, alarm and annunciation.”;

- (D) under the heading “Fire Fighting Equipment”, under sub-heading “Compressor stations:”, after the words beginning with “(a.) Compressor area...” and ending with “...(1) number 2 kg CO₂ based.”, in sub-heading “Gas receipt / delivery terminals ;” the following shall be substituted, namely: -

“(a.) Compressor area

One (1) number 9 kg Dry Chemical Powder (DCP) based

One (1) number 6.5 kg CO₂ based per two compressors and

One (1) number mobile 75 kg DCP based.

(b.) Pigging Area, Metering Area and Gas Filtration Area

One (1) number 9 kg DCP based at each location

(c.) Air compressors

One (1) number 2 kg CO₂ and one number 5 kg DCP based.

(d.) Office/ Canteen/ Stores

Two (2) number 9 kg DCP based in each building.

(e.) MCC/DG Room/HT room

Two (2) number 4.5 kg CO₂ based in each room or per 100 m² floor area.

4 sand buckets with stand shall be provided near to DG room.

A trolley containing first aid fire protective accessories shall also be provided.

Intermediate pigging station:

One (1) number 75 kg and one (1) 9 Kg DCP based and one (1) number 2 kg CO2 based.

100% spares for CO2 cartridges and 50% spares for DCP cartridges shall be stored

Sectionalising Valve stations:

One (1) number 9 kg DCP based and one (1) number 2 kg CO2 based.

100% spares for CO2 cartridges and 50% spares for DCP cartridges shall be stored

Gas receipt / delivery terminals:

One (1) number 75 kg and one (1) 9 kg DCP based and one (1) number 2 kg CO2 based.;

- (E) under the heading “Fire Fighting Equipment”, under sub-heading “Gas receipt / delivery terminals;”, the following paragraph shall be omitted, namely: -

"Firefighting system with fire water network shall be provided at gas compressor stations";

- (F) under the heading “The following shall also be considered:”, under sub-heading “Fire Water System;”, after the words beginning with “The Fire water system....” and ending with “...consisting of:”, the following shall be substituted, namely: -

"Firefighting system with fire water network shall be provided at gas compressor stations and shall consist of:";

- (G) under the heading “The following shall also be considered:”, under sub-heading “Design Flow Rate”, the first paragraph beginning with “The fire water pumping....” and ending with “...whichever is higher”, and second paragraph beginning with “Spray rate ...” and ending with “...as follows:”, the following shall be substituted, namely: -

“The fire water pumping requirement for medium velocity spray shall be calculated based on the spray rate given below or flow through two (2) nos. of fire water monitors (i.e 288 m3/hr) whichever is higher. Spray rate for various areas shall be as follows:”;

- (H) under the heading “The following shall also be considered:”, under sub-heading “Design Flow Rate”, after the words beginning with “Compressor area, gas after cooler area,” and ending with “...monitors and hydrants.”, the following shall be substituted, namely: -

“Gas after cooler area, pigging area, filtration area, metering area, condensate collection area etc. of the Compressor station shall be covered with medium velocity water spray system.”;

- (v) in Shedule-1G, in Annexure II, under the heading “Metering Equipment”, after the words beginning with “AGA Report No. 9...” and ending with “...Ultrasonic Meters.”, the following shall be substituted, namely: -

“AGA Report No. 9 Measurement of Gas by Multi-path Ultrasonic Meters & Gas Meters and OIML R 137 Part1 & 2 , Part1: Metrological and technical requirements Part2: Metrological controls and performance tests”.

(Vandana Sharma)
Secretary

[F.No. PNGRB/Tech/2-T4SNGPL/(1)/2019]

[ADVT-III/4/Exty./378/2019]

Foot Note: The Principal regulations were published in the official gazette vide No. G.S.R. 808(E), dated the 11th November, 2009, and amended vide F. No. REG/T4S/NGPL/1/2012, dated 03.09.2012 F. No. REG/T4S/NGPL/1/2012, dated 14.03.2014, F. No. L-MISC/VI/I/2007, dated 01.01.2015 and F. No. INFRA/PNGRB/T4S/NGPL/I/2015, dated 05.01.2018.