

Views/Comments received on webhosted proposed Amendments in PNGRB T4S CGD Regulations

S. No	Clause No./ Reference	Proposed Amendments	Sub-Committee Recommendations	GGL Comment
1	Schedule - 1A (MATERIALS AND EQUIPMENT)	Inclusion of reinforced thermoplastic pipes as per API 15S : Spoolable Reinforced Plastic Line Pipe.	Add the following in Schedule-1A, under the heading "Steel Pipe", "Reinforced Thermoplastic Pipes (RTP)" "Reinforced Thermoplastic Pipes (RTP), if used shall conform to API RP 15S. All Pipe and fitting shall meet the requirements as per standards and testing methods prescribed in API 15S. "	<p>As per ASME B31.8, following are to noted for RTP Pipes:-</p> <ol style="list-style-type: none"> 1) The design/operating pressure for RTP pipelines shall not exceed 6.89 Bar. <p>Hence, as per PNGRB T4S, RTP pipes may be used for secondary and tertiary network only.</p> <ol style="list-style-type: none"> 2) The nominal Pipe Size(NPS) of RTP Pipes is max. upto 6". <p>Hence, RTP pipes may serve as an alternative to PE pipes instead of Steel pipe.</p> <p>Further following details are required for study on the product:-</p> <ol style="list-style-type: none"> 1) Credentials of the product in CGD Industry. 2) Details on jointing methodology and reference standard for same are required. 3) Details of fittings and their corresponding standards are required.

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2	<p>Schedule 1C, Fittings other than Valves and Flanges, (a) Polyethylene resin used for manufacture of thermoplastic fittings shall be virgin, cadmium free pigmented compound. Anti-oxidant and UV stabilizers used in PE resin shall not exceed 0.3 and 0.5 percent respectively. Reprocessed material shall not be used.</p>	<p>Review of the requirement of anti-oxidant & UV stabilizers in PE resins.</p>	<p>Modify the sub-clause (a) in Schedule 1C, under the heading "Fittings other than Valves and Flanges", as under: Original Clause "Polyethylene resin used for manufacture of thermoplastic fittings shall be virgin, cadmium free pigmented compound. Anti-oxidant and UV stabilizers used in PE resin shall not exceed 0.3 and 0.5 percent respectively. Reprocessed material shall not be used" Proposed clause "Polyethylene resin used for manufacture of thermoplastic fittings shall be virgin, cadmium free pigmented compound. Anti-oxidant and UV stabilizers used in PE resin shall meet the requirements as per EN1555-1, and ISO 4437-1. Reprocessed material shall not be used"</p>	<p>No Comment</p>

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3	Annexure- II (3) Metering Equipment	<p>Metering Equipment:</p> <p>1. BS EN 14236: Ultrasonic domestic gas meters</p> <p>2. ISO 17089-2: Measurement of fluid flow in closed conduits – Ultrasonic meters for gas – Part 2 – Meters for industrial applications.</p>	<p>Add in Annexure-II, under the heading “Metering Equipment”, after the letters and numbers beginning with “EN 12261...” and words ending with “.... Turbine gas meters”, the following shall be added, namely: - “a. BS EN 14236: Ultrasonic domestic gas meters. ISO 17089-2: Measurement of fluid flow in closed Conduits-Ultrasonic meters for gas – Part 2 – Meters for industrial applications.”</p>	<p>1. Ultrasonic metering is new to Domestic segment and its study for adaptability / suitability should be thoroughly carried out first and results reviewed among CGD operators. Basis the outcome of this study and review, consideration to include BS EN 14236 in T4S may be given.</p> <p>2. AGA 9 is specific standard for ultrasonic meter which is being followed since long. ISO 17089-2 is a new standard which need to be compared with AGA 9 before commenting.</p>
4	Annexure- II (3) Metering Equipment	<p>Include OIML R137: 1&2-Thermal Mass Flow Gas Meters</p>	<p>Modify the following in Annexure-II, Metering Equipment :OIML R137: 1&2-Thermal Mass Flow Gas Meters conforming to ISO 14511</p>	<p>As OIML R137 is generic standard related to Metrological, Technical requirements, controls and performance tests for all type of Gas Meters, this can't be taken as a reference point for any specific metering technology. Thermal mass flow metering is new to CGD industry and its study for adaptability / suitability should be thoroughly carried out first and results reviewed among CGD operators. Basis the outcome of this study and review, consideration to include ISO 14511 or any other more specific AGA / EN standard in T4S may be given.</p>

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5	PNGRB (Gas Supplies to High Rise Multi Occupancy Buildings) Guidelines, 2020 Clause 10 (c)	Addition: Issue of guidelines for gas supplies to High Rise Multi Occupancy Buildings.	Enclosed as "Annexure-I"	<p>Clause No. 4- General:- Point No. (e) - In case of basement and where PE pipeline is not laid inside building premises, HDPE sleeve and RCC crimp guard are not applicable.</p> <p>Clause No. 4- General:- Point No. (f) - As the pressure testing of the riser can be carried out by alternate method, provision of Tee should be optional.</p> <p>Clause No. 4- General:- Point No. (h) - In addition, other methods of laying with supports for example 'on the sidewall' to be allowed.</p> <p>Clause No. 4- Meter Positions:- Point No. (a) - The meter can also be installed in balcony adjacent to kitchen/ wash area of the kitchen.</p>
6	PNGRB (Providing Gas Connections in Completely Enclosed Buildings i.e. AC Malls, Basements, Multi-tier Building etc.) Guidelines, 201911.0 "Safety Measures"	Addition: Issue of guidelines for providing connections in completely enclosed buildings i.e. AC Malls, Basements, Multi-tier Building etc.	Enclosed as "Annexure-II"	No Comment

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7	Schedule - 1D VALVES	Use of Sectionalising Valves as per PNGRB T4S NGPL Regulations in place of 3 km required as per PNGRB T4S CGD Regulations for its 24" and 18" pipelines downstream of CGS considering the larger length of pipelines required to connect its customers.	<p>Add after "- In steel distribution mains valve spacing should normally not be more than 3 km", in the Schedule-1D, under the heading Valves, (a) High Pressure Distribution System: Based on operation and maintenance flexibility requirements, valves may be provided on: "The inter-distance between the Sectionalising Valves in steel pipes in CGD networks can be maintained as per the PNGRB (Technical Standards and Specifications including Safety Standards for Natural Gas Pipelines) Regulations, 2009 considering the location class after complying with the following: I. The steel pipelines in the CGD networks shall be designed considering location Class-4.ii. The gas in the network is odorised and filtered. iii. Additional number of SVs shall be provided to meet the requirements as per location class in case of, the change in population density. The assessment of location class shall be undertaken every year. "</p>	Agreed with Sub-committee recommendation, however definition of High Pressure Distribution System is required. Beyond what pressure entity should considered high pressure distribution system as PNGRB T4S for CGD.

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8	<p>Schedule-1D CGD network Description, Clause (ii)ii) Secondary Network: A low Pressure Distribution System comprising of Gas Mains or Distribution Mains usually constructed using thermoplastic piping (MDPE) and connects DPRS to various service regulators at commercial, industrial, and domestic consumers. The network shall be sized for maximum flow velocity of 100 ft / sec (30 m/sec).</p>	<p>To replace the word “MDPE” with “PE” for more clarity as the regulations primarily uses PE while MDPE is used only in definition of secondary and tertiary networks in the regulations.</p>	<p>In schedule-1D, under the heading “CGD network Description”, clause ii) beginning with “Secondary Network...”, and ending with “....100 ft / sec (30 m/sec).”, the following shall be substituted, namely: - “ii) Secondary Network: A low Pressure Distribution System comprising of Gas Mains or Distribution Mains usually constructed using thermoplastic (PE) piping and connects DPRS to various service regulators at commercial, industrial, and domestic consumers. The network shall be sized for maximum flow velocity of 100 ft / sec (30 m/sec).”,</p>	<p>No comment</p>
9	<p>Schedule-1D CGD network Description, Clause (iii)iii) Tertiary Network: A service Pressure Distribution System comprising of Service Lines, Service Regulators and customer/ consumer Meter Set Assemblies constructed using a combination of thermoplastic (MDPE) piping and GI/ copper tubing components.</p>	<p>To replace the word “MDPE” with “PE” for more clarity as the regulations primarily uses PE while MDPE is used only in definition of secondary and tertiary networks in the regulations.</p>	<p>In schedule-1D, under the heading “CGD network Description”, clause iii) beginning with “Tertiary Network...”, and ending with “.... tubing components.”, the following shall be substituted, namely: -“iii) Tertiary Network: A service Pressure Distribution System comprising of Service Lines, Service Regulators and customer/ consumer Meter Set Assemblies constructed using a combination of thermoplastic (PE) piping and GI/ copper tubing components.”,</p>	<p>No comment</p>

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10	<p>Schedule-1E PIPELINE SERVICE CONVERSIONS Steel pipelines and mains used in CGD Network shall not be used for dual service. Conversion of existing steel pipelines, previously used for service other than natural gas, for use in CGD Networks is not permitted.</p>	<p>Proposal w.r.t. utilisation of the existing LPG reticulated piping network to provide PNG supply in existing societies after making necessary modification in existing piping system as per latest T4S for CGD regulations.</p>	<p>(i) in schedule-1E, under the heading "PIPELINE SERVICE CONVERSIONS", the clause beginning with "Steel pipelines and mains...", and ending with "...Networks is not permitted.", the following shall be substituted, namely: - "Steel pipelines and mains used in CGD Network shall not be used for dual service. Conversion of existing steel pipelines, previously used for service other than natural gas, for use in CGD Networks is not permitted, unless it meets the requirements of these regulations."</p>	<p>No comment</p>