In the absence of customers tanks or if the tank capacity is not sufficient to tackle the demand fluctuation during the day, the water networks shall be designed for suitable peak hour demand factor considering the available storage capacity.

6.12 Head losses in Networks

The water distribution networks shall be sized for the following targeted maximum head losses at the peak design flow at normal operating conditions (i,e. without fire flow).

Table 3: Head losses in Networks (m/km)

No.	*Pipelines Size (mm)*	*Target head losses ranges (m/km)*	*Remarks*
1	100 to 300	1.0 to 3.0	Different ranges are acceptable if hydraulically and economically justified
2	> 300	2.0 to 5.0	Different ranges are acceptable if hydraulically and economically justified.

As the available residual pressure at Transco interface points is generally much higher than the minimum required pressure of 1.25 bars and the distance from the interface points to the distribution networks is relatively short, therefore head losses (m/km) higher than the values shown above may be applied if technically and economically justified.

6.13 Maximum and Minimum Velocities in Water Networks

Ideally the distribution networks shall be designed to achieve minimum pressure criteria in the distribution system in a hydraulically and economically efficient manner. This will be generally achieved at water velocity of 0.4 m to 0.6 m/sec that give head losses of 1.0 to 5.0 m/km in pipelines.

The maximum target velocity shall be in a range of 1.0 to 2.0 m/s depending on size of pipeline. However, under certain and justified conditions such as at fire flows velocities up to 3.0 m/s shall be acceptable.