

## GATE VALVES - METAL SEATED vs SOFT SEATED

1. Butterfly valves are resilient seated and there exists an IS, BSEN as well as AWWA standard, are mostly leak tight.
2. There is no IS standard available for soft seat gate valves.
3. AWWA standard for Resilient seated gate valve (C515-09) does however cautions the user of the following shortcomings in such valves - a) in its Scope (1.1.3) it says, "This standard is not intended to describe special conditions of installation or operations in **conveyance of unusually corrosive water, excessive water hammer, frequent operation (as in filter service), or operation in a throttled condition**".
4. It is an age old practice to use Gate (Sluice) valves in throttled condition for water Distribution lines. With the limitations imposed by the American standard itself, it makes a Resilient seated sluice valve unfit for use in Sewage, Water treatment plants, rising mains and Distribution requiring throttling.
5. The positive features of this type of Resilient Gate valve that was deemed good are - **DI construction & electrostatic epoxy coated** (and therefore decent looking), **glandless and therefore no leakage from gland**.
6. Good and reliable manufacturers do make **metal seated gate valves** with all these features - **in DI construction & epoxy coated, glandless**. Additionally, wherever needed they are able to provide anti friction ball thrust bearing arrangement for ease of operation. And depending upon the quality of water, able to use TRIM material which is suitable for the application. And finally these valve are being and can be used in throttling operation in distribution lines.
7. While recent uses of soft gate valves have revealed fast wearing out of the elastomer covering on the door when used in water of dubious quality and river water, bodies are known to have pitted with gaping holes when used in throttled condition.



**Metal seated gate valves from reliable manufacturers with long track record easily last for 20 or more years.**

In view of the aforesaid, it may be desirable to use metal seated gate valves, in DI construction, liquid epoxy coated, Glandless with trim material to suit the application, rather than soft seated gate valve.