

Comparison of API Plan 53 A, Plan 53 B and Plan 53 C

<b>Design Features</b>	<b>API Plan 53A</b>	<b>API Plan 53B</b>	<b>API Plan 53C</b>
Need to evaluate stuffing box pressure	Yes	Yes	No
Barrier fluid pressure	Maximum stuffing box pressure + 2 kg/cm <sup>2</sup>	Maximum stuffing box pressure + 2 kg/cm <sup>2</sup>	stuffing box pressure + 1 - 2 kg/cm <sup>2</sup>
Differential pressure between barrier fluid and stuffing box fixed	No	No	Partial
Barrier fluid pressure automatically changes with varying stuffing box pressure	No	No	Yes
Suitable for use with low suction pressure	Yes	Yes	No
Nitrogen Gas required	Yes	Yes	No
Nitrogen absorption into barrier fluid	Yes	No	No
Instrumental requirement	More	More	less
Suitability for low variation in stuffing box pressure	Yes	Yes	No
Large amount of useable seal barrier fluid	Yes	No	No
Thermal degradation of working fluid	Slow	Fast	Fast
Magnetic level indicator	No	No	Yes
Flow restriction of barrier liquid due to extra cooler	No	Yes	Yes
Power consumed by Mechanical Seals	More	More	Less
Can work when inboard seal is not reversed balanced	No	No	Yes
Effect of Solar Radiation	Yes	Yes	No
Outboard seal is subjected to maximum Stuffing Box Pressure + 2 kg/cm <sup>2</sup> (Approx)	Yes	Yes	No 9actual st. box pressure + 2kg/cm <sup>2</sup> (approx

In view of above Plan 53 C becomes the best selection