



CERAMIC LINERS

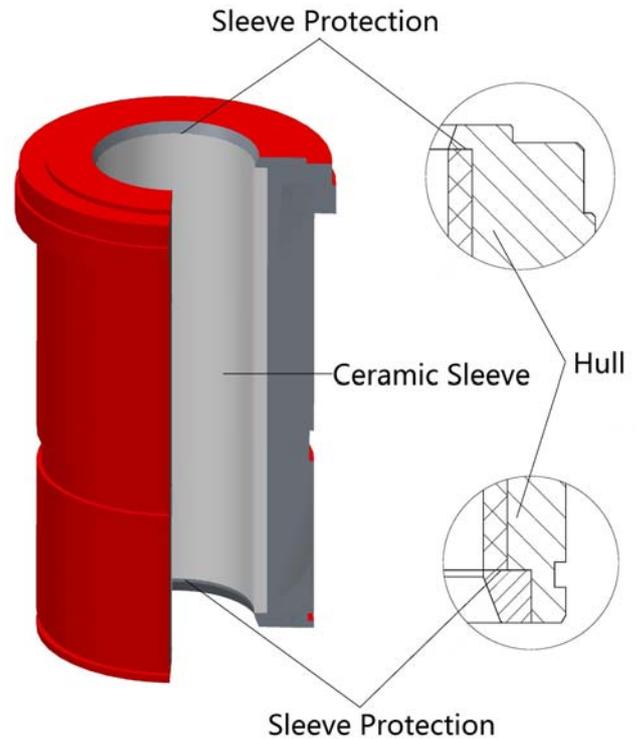
Ceramic Liners have never been so affordable, time to switch!

Less pump downtime,

Less rig downtime,

Extended piston life,

Huge cost saving!



<i>Liners</i>	<i>Service Life</i>	<i>Feature</i>
Chrome Sleeved Liner	800 hrs	<i>Traditional choice</i>
Economical Ceramic Sleeved Liner	2500 hrs guaranteed	<i>Economical for less budget, only twice price of same model and size chrome sleeved ones</i>
Premium Ceramic Sleeved Liner	5000 hrs guaranteed	<i>For higher and longer service life application requirement</i>

- *We give two options of ceramic liners to fit different requirements*
- *Protection ends sleeve, no more accident ceramic crack
(some model liners do not apply, subject to specific inquiry)*
- *Up to 7500psi pressure application*

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Trenchless Drilling (HDD)

ZIRCONIA CERAMIC LINER

As a supplier dedicated to offer customer with excellent experience and valuable products, JES bring the big boosting for trenchless drilling (HDD) —zirconium based ceramic liner to help the owners earn more.

Zirconia VS Chrome

Compare to Chrome, zirconia features:

- Higher endurance of abrasion
- Corrosion resistance
- More suitable for discontinuous drilling

All above features translate to longer service time of the liner; no worry for the corrosion brought by the drilling fluid remaining during discontinuous drilling compared to chrome plating or sleeved liners, more stable performance of mud pump and liner, which is an ideal alternative for alloy liner.

What the zirconia can do more:

- Lower thermal load on the liner wash system
- Higher thermal ratings
- HP design with shoulder-on-hull to prevent sleeve slippage for most liners
- ID tolerances of $+.005"/-.000"$
- Hardness is ≥ 90 Rockwell
- Improved performance for high temperature applications
- Liner available from $1\frac{1}{2}"-8"$ especially fitting trenchless drilling (HDD)

Zirconia VS Alumina

Compare to alumina, zirconia features:

- Better impact strength
- Higher hardness
- Finer surface finishes than alumina
- Competitive cost beating alumina

All above features translate to lifetime cost savings and liner replacement frequency reducing, while the finer surface finishes indirectly leads to less friction with pump pistons which in turn extends piston service life.



Contact us for more detailed information and sample liner,

You try, you trust, and you deserve it!

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Trenchless Drilling

CHROME SLEEVED LINER

As a supplier dedicated to offer customer with excellent experience and valuable products, now JES has been on the road of supplying mature chrome sleeved liners for years which has been widely applied in drilling area.

High Chrome Sleeve VS Quenched Steel

- Out hull is high strength forging
- Good tenacity
- Higher strength and hardness
- Longer service time

Compared to quenched steel liner, JES high chrome sleeved liner highly increases the strength and hardness which supplies longer service time thus reduces the liner replacement cost.

High Chrome Sleeve VS Chrome Plating

- Centrifugally cast high chrome sleeve
- Higher durability
- Cover almost all the liner sizes fitting the major trenchless drilling mud pump
- Environment friendly

JES high chrome sleeved liner is good replacement for chrome plating liner with negligible pollution compared to chrome plating ones thus the price is much more economical plus better performance.

JES high chrome sleeved liner features:

- Rated for all drilling operations.
- Bore hardness is 62-69 Rockwell.
- "HP" lip design to prevent inner sleeve slippage.
- Extremely long service life.



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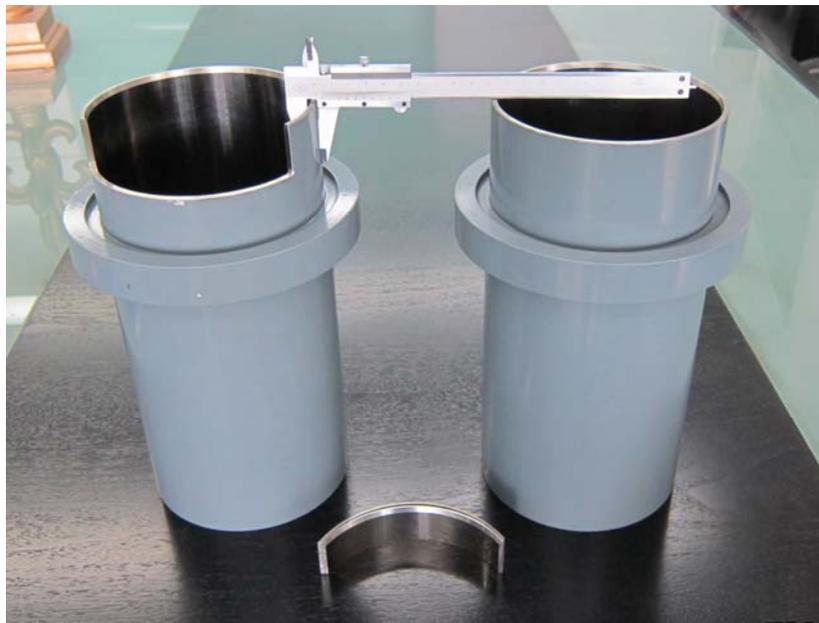
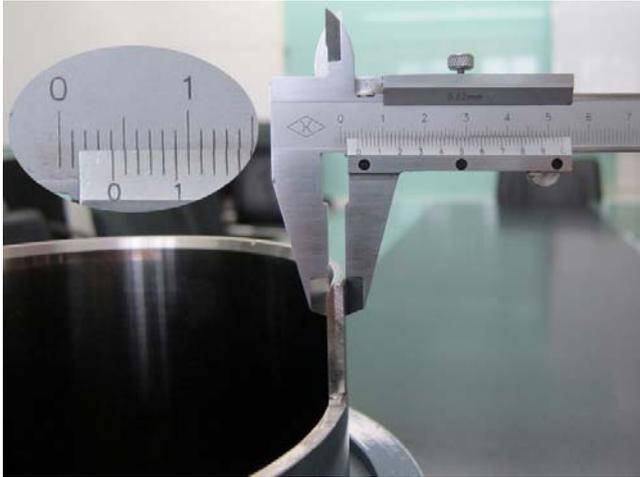
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ULTRA-THIN SLEEVED LINERS

Still trapped in the only two options—cemented quenching or chrome plating of ultra thin wall liners, but suffering from poor wear-resistance of cemented quenching and strict environment control of chrome plating?

Now JES, the liner expert, supplies **ultra-thin sleeved liners** as a perfect solution, covers almost all the usually applied ultra thin wall liners!



- Ultra thin wall up to 4mm including sleeve and out hull*
- At least double anti-wearing and strength compare to chrome plating*
- Environment-friendly with less pollution*
- Almost covers all the usually applied liner size*
- Economical or even less cost compare to chrome plating*

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