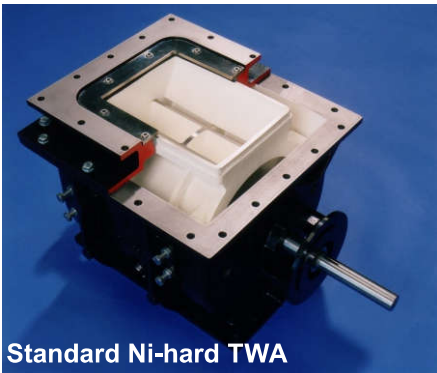




# Rotary Valves Ceramic lined

Abrasion of rotary valves when handling abrasive products has always been a maintenance headache, especially when combined with the age-old problem of leaking shaft seals.

MID has partially solved this problem with the TWA extreme duty rotary valve. A combination of Ni-hard components and mechanical shaft seals increase valve life by a factor of around 5 over standard valves with virtually no maintenance.



**Standard Ni-hard TWA**

However, this still is not enough for customers handling intensely abrasive products where a standard valve lasts a matter of days and a TWA, even with its abrasion resistant components, lasts only a few weeks.



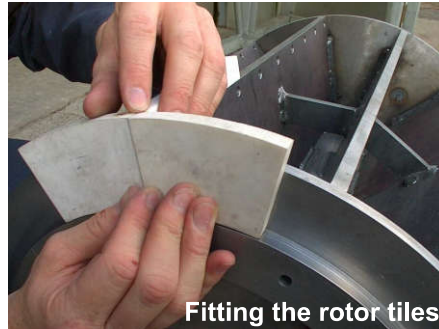
**Worn TWA Ni-hard liner**

The development of MID's ceramic tiling option for the TWA rotary valve makes the valve last up to 10 times longer than a standard cast iron valve.

We have developed a method of cutting alumina ceramic tiles so they are self-supporting- similar to a Roman arch. To prevent movement, the tiles are bonded to the parent material using a ceramic

epoxy resin, much harder than a standard epoxy and ideally suited to the job.

The rotor and liner are then ground using diamond wheels to a close tolerance,

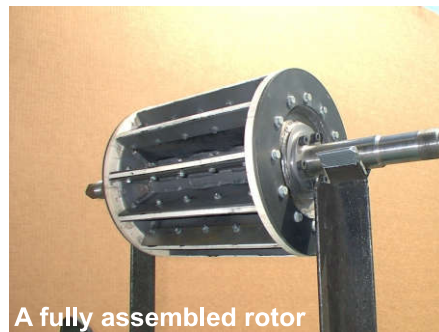


**Fitting the rotor tiles**

taking off the high spots naturally found when manually assembling the tiles.

The TWA is then assembled, using the adjustable design to ensure the clearance between the rotor and the liner is tightly controlled.

A high performance polyurethane seal is then used on the top casting to allow the liner to float slightly for adjustment on site as the valve wears.



**A fully assembled rotor**

The result is a valve which can be used on materials traditionally considered too abrasive for rotary valve technology. The valve is also ideally suited where maintenance and downtime is critical and must be kept to a minimum.

The other good news is when the valve is worn beyond its adjustment capability, the tiles can be removed, a new set installed and ground and the valve returned as good as new, all for less than the price of a standard rotary valve of an equivalent size. The advantage is

obvious- the lifetime cost of a ceramic TWA rotary valve is dramatically less than a standard valve, especially when the costs of lost production, maintenance and downtime are also



**A ceramic tiled liner**

added into the equation.

When combined with MID's mechanical shaft seal technology (and we would not sell an abrasion resistant valve without these fitted) the TWA extreme duty ceramic lined rotary valve is the ultimate in rotary valve technology for abrasion resistance.

MID have a policy of continuous development. We strive to design and manufacture equipment to exacting standards and are well known within the industry for taking on challenges other companies shy away from. The



**An assembled ceramic TWA (top casting removed)**

ceramic TWA rotary valve is the latest in a long line of products engineered for longevity and minimum maintenance.

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