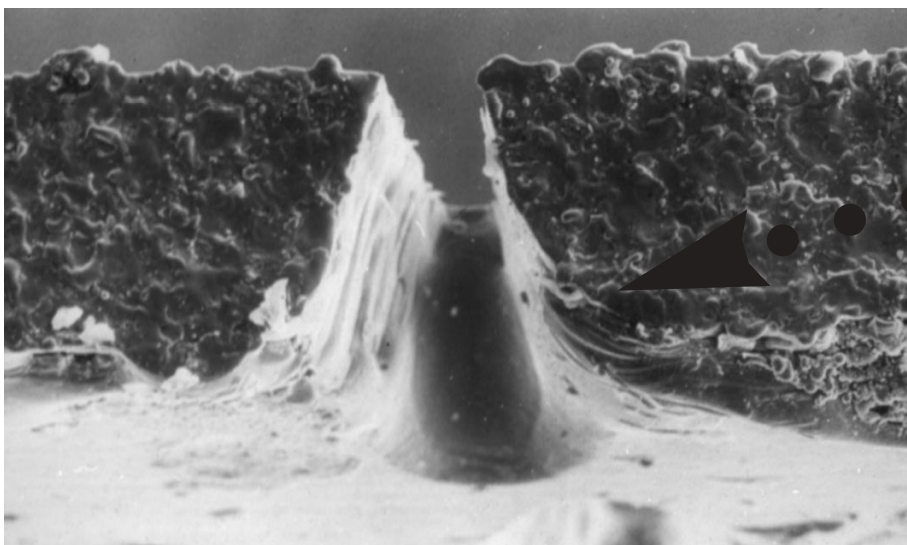
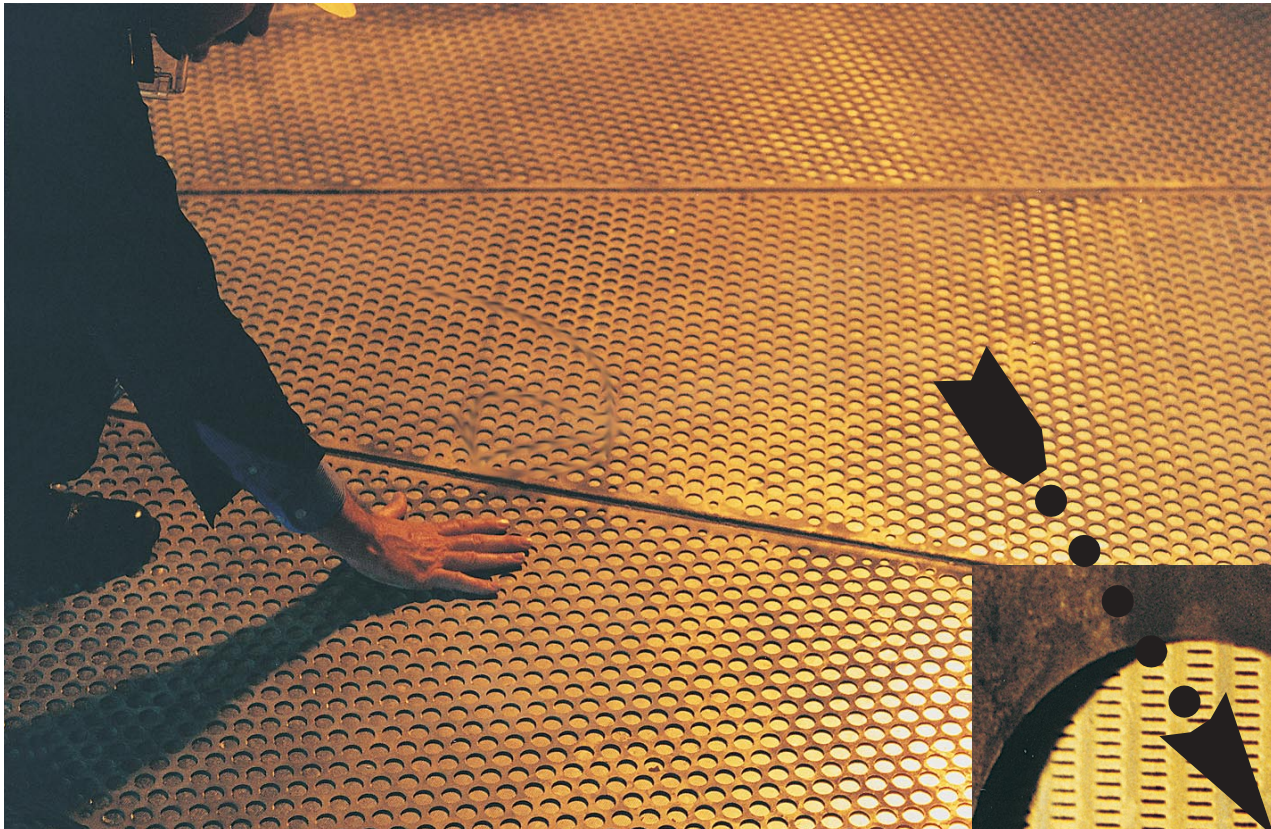


ActionLaser

STAINLESS STEEL LASER-DRILLED LASERSCREENS FOR ROTARY PAN FILTERS



NEW SCREENING TECHNOLOGY!

What is an ACTIONLASER LaserScreen?

LaserScreens are sheets of stainless steel containing millions of tiny tapered holes. The holes are usually slots but may be circular. Each sheet is accurately perforated using a patented laser process, to specific dimensions and open area percentage.

How are LaserScreens used on pan filters?

Pan filters are large circular filters rotating slowly in a horizontal plane. They are often used to “dehydrate” and “wash” particulate matter; for example, in the alumina production process, caustic liquor is drained from alumina hydrate and residual liquor washed from the hydrate with clean water, in preparation for its high-temperature calcination to produce alumina.

Traditionally, cloth screens have been used as the filtering elements on pan filters. **LaserScreens** are a direct replacement for cloth screens. As with the cloth screens, the **LaserScreens** are supported on top of thick perforated plates of mild steel. The **LaserScreens** also have a thin perforated steel plate on top of them so that they are sandwiched for complete support.

What are the advantages of using LaserScreens on pan filters?

Longevity is the key advantage. Compared with cloth screens which usually last only a couple of months, **LaserScreens** typically last several years. Thus screen replacement costs and downtime losses are reduced enormously, more than compensating for the higher initial cost of **LaserScreens**.

But LaserScreens offer much more:-

- NO possibility of screen “blowout” during filter blow-back cycle (as happens occasionally with cloth screens).
- LESS loss of solids due to damaged screens (cloth screens frequently develop small holes or tears).
- MORE consistent results- an outcome of the greater resistance to damage and much longer lifetime of **LaserScreens**.
- FASTER cleaning- due to the tapered **LaserScreen** holes which resist clogging. For example, in the alumina application, hot caustic screen washing times are substantially reduced.
- LESS maintenance means less worker exposure to potential hazards and injury. Also, the removal and fitment of cloth screens is a difficult procedure, for which proper work practices must be closely followed, to avoid potential injury.

How are LaserScreens installed on pan filters?

The **LaserScreens** are welded in position semi-permanently. The welds are continuous and vacuum-tight to eliminate leaks. This is a much more positive and fail-safe arrangement than methods used with alternative screens.

What are the typical specifications for LaserScreens used on pan filters for alumina?

• MATERIAL [Example only]: The **LaserScreen** shim is 0.3mm thick stainless steel type 304. This is sandwiched between mild steel perforated plates 5mm thick (below) and 2mm thick (above).

• PERFORATIONS [Example only]: The **LaserScreen** shim has slots 135 microns (0.135mm) wide and about 1mm long on the working (upper) face. The slots are larger on the non-working face. Its open area is 11%. The mild steel perforated plates have large circular holes and open areas in excess of 50 %.

• DIMENSIONS [Example only]: There are 20 wedge-shaped filter segments in each pan filter set. These form an annulus with an outer diameter of 7.3 metres when assembled. The **LaserScreens** can be custom-made to suit the user’s requirements.

**How can I obtain further information on ActionLaser LaserScreens?
Contact ActionLaser!!**



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