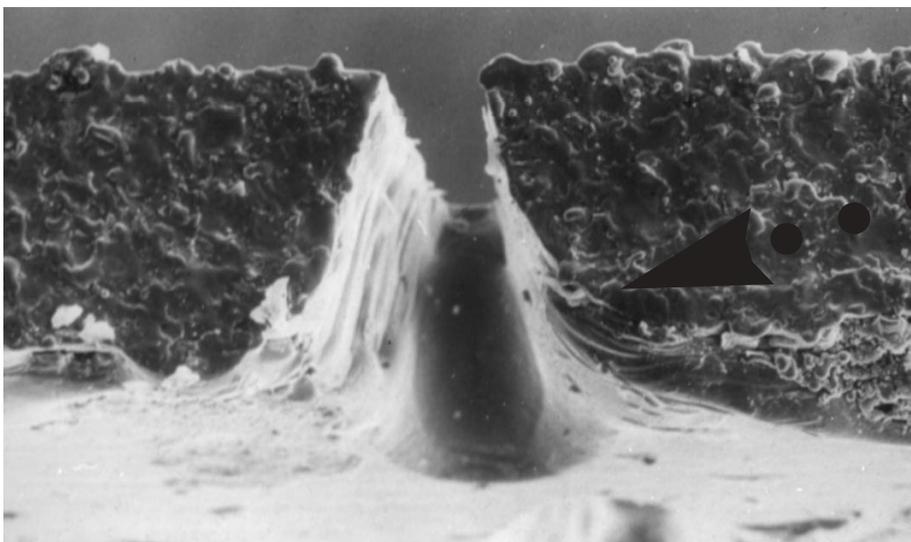
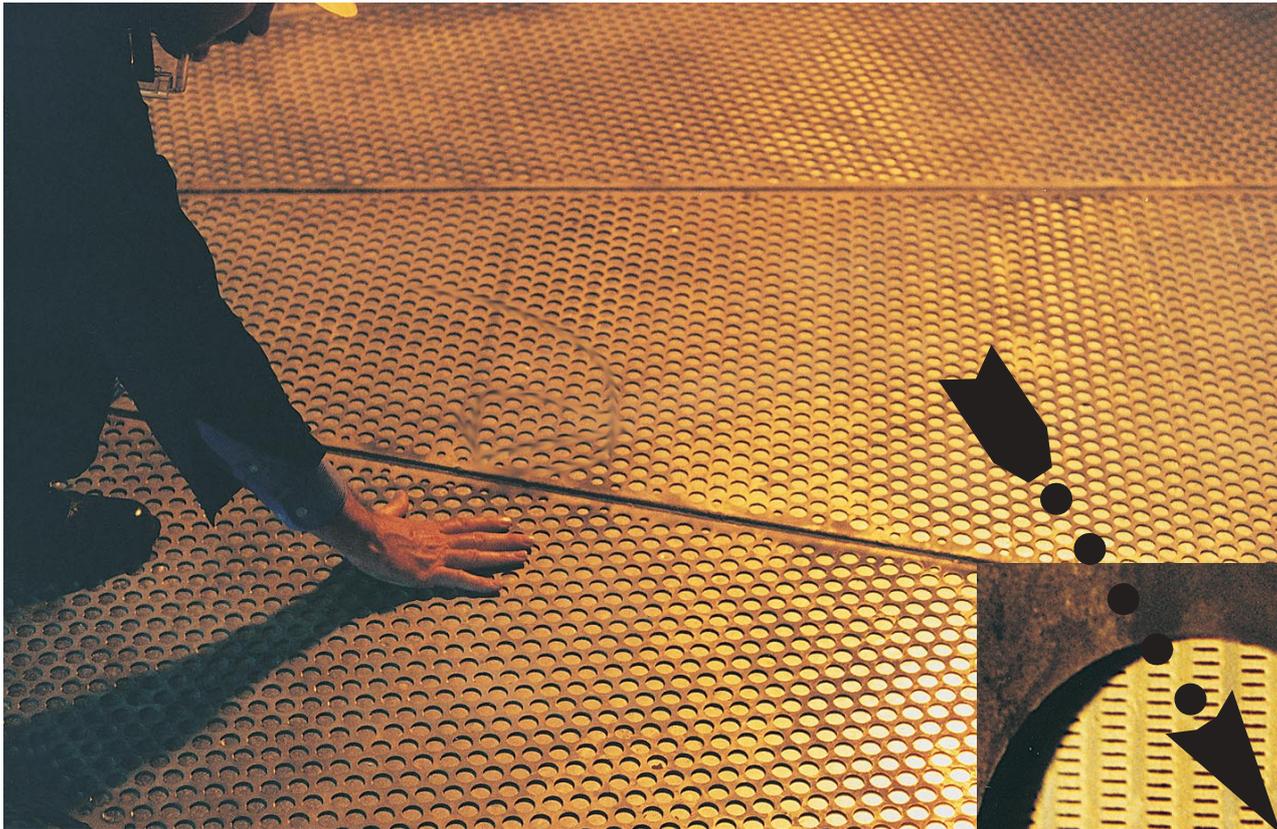


ActionLaser

# STAINLESS STEEL LASER-DRILLED LASERSCREENS FOR ROTARY PAN FILTERS



**NEW SCREENING TECHNOLOGY!**

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### **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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