



## INLETS WHY THEY FAIL



The areas that show the WHITE or lighter appearance have corrosion to the inner skin. The corrosion leads to disbond of the internal Screen, which will eventually lift and peel off. See Slide 2.

Once corrosion starts, the dissimilar metals, Aluminum Barrel to Stainless Steel Screen will cause Galvanic corrosion and accelerate the rate of deterioration.

# INLETS WHY THEY FAIL



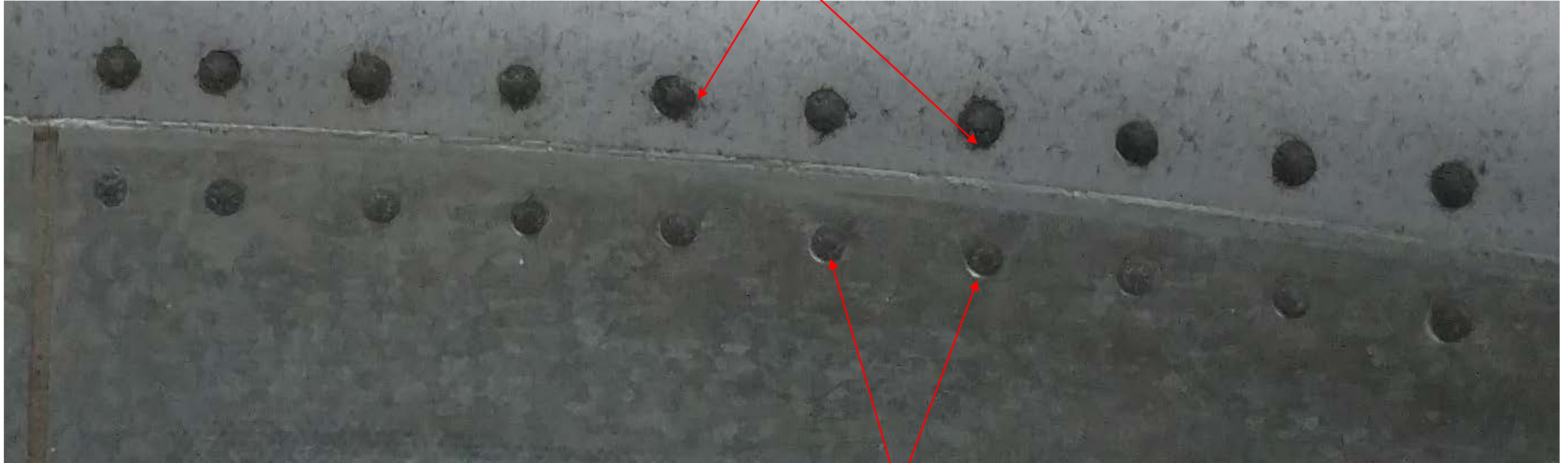
Catastrophic failure of the screen.  
Peeled off and wrapped around  
the PT1 Probes.



# INLETS WHY THEY FAIL



Lip Skin corrosion starting  
under the countersink of  
the Hi-Loks

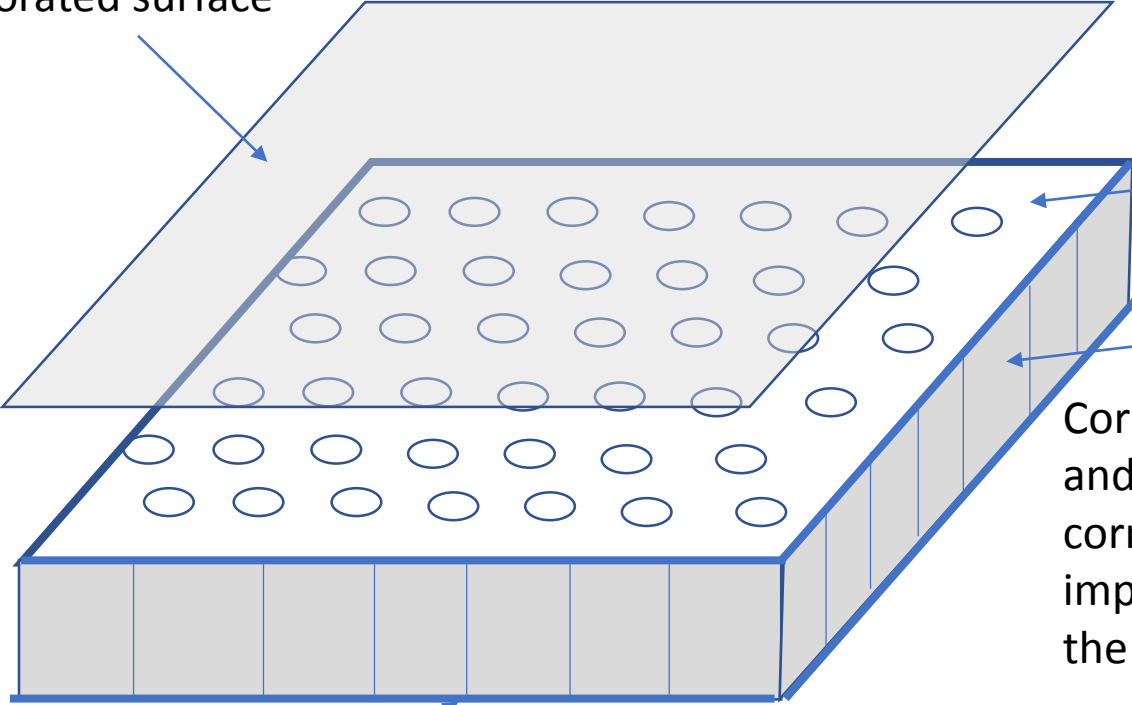


Corrosion of the inner Barrel is causing the barrel  
to Bulkhead attachment Hi-Lok pins to start pulling  
through into the surface due to the material  
expanding as the corrosion build up.

# INLETS WHY THEY FAIL



Stainless wire cloth bonded to inner perforated surface



2024 T3 Perforated Aluminum Inner Barrel Skin

Honeycomb

Corrosion of the inner barrel surface is caused by moisture and accelerated by salt or chemicals such as acid rain. The corrosion gets into the perforated holes making it impossible to remove. So any attempt to repair by cleaning the surface and bonding new screen will fail in 1-3 years.

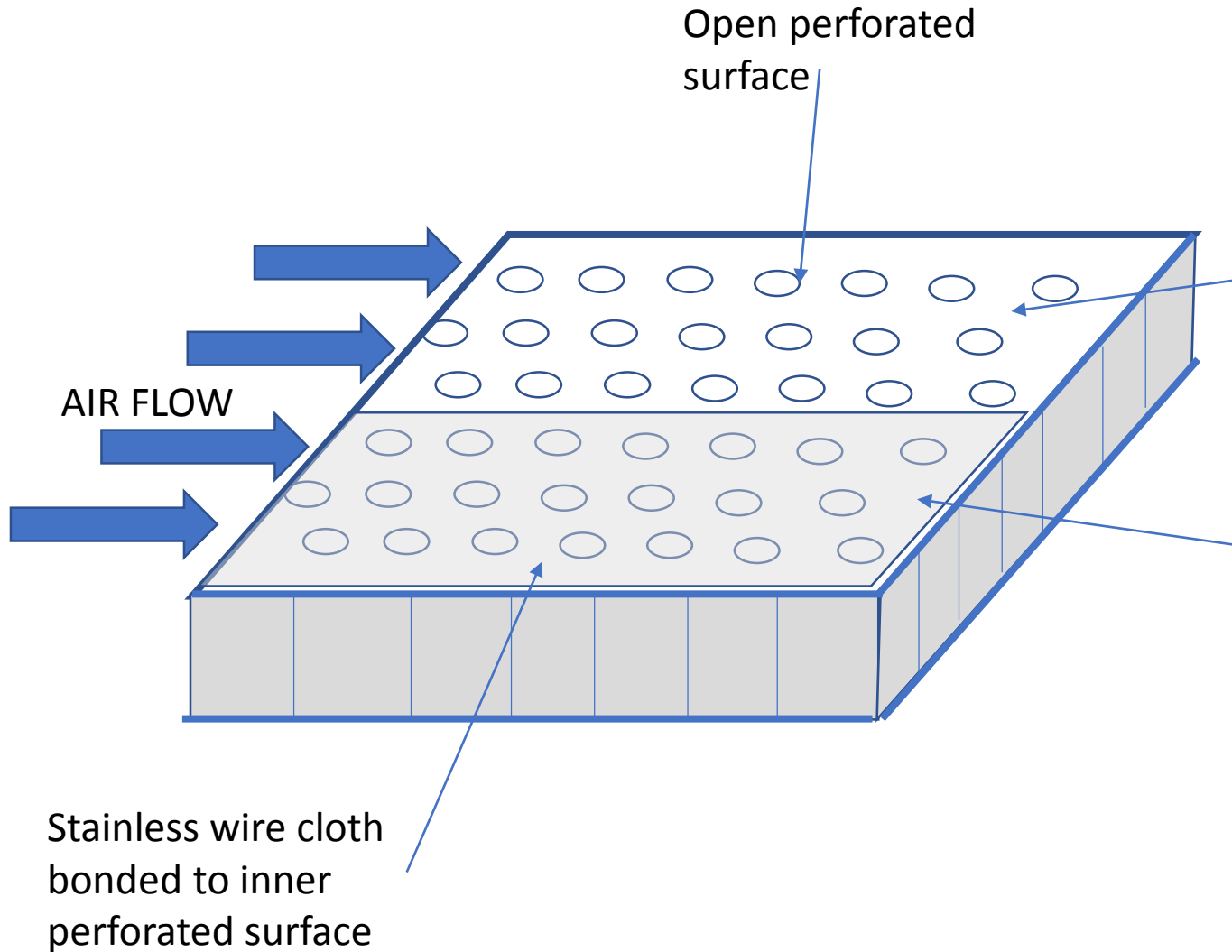
2024 T3 Aluminum Outer Skin

Additional problems occur as the Stainless Steel 'Screen' and Aluminum perforated face sheet are incompatible, and once the adhesive bond break downs, Galvanic corrosion of the aluminum will accelerate the degradation.



# INLETS

## WHY THEY FAIL



Earlier generation Inlets with noise treatment had an inner barrel with an open perforated surface, the effect of airflow over the surface creates a venture effect and sucks moisture out.

Later generation Inlets added the 'Acoustic Screen' which acts as a filter and increases the noise attenuation properties by as much as 30%.

The Screen is permeable so moisture can pass through it, but with no open holes the effects of the airflow no longer creates a venture effect so moisture remains trapped which accelerates the onset of corrosion.