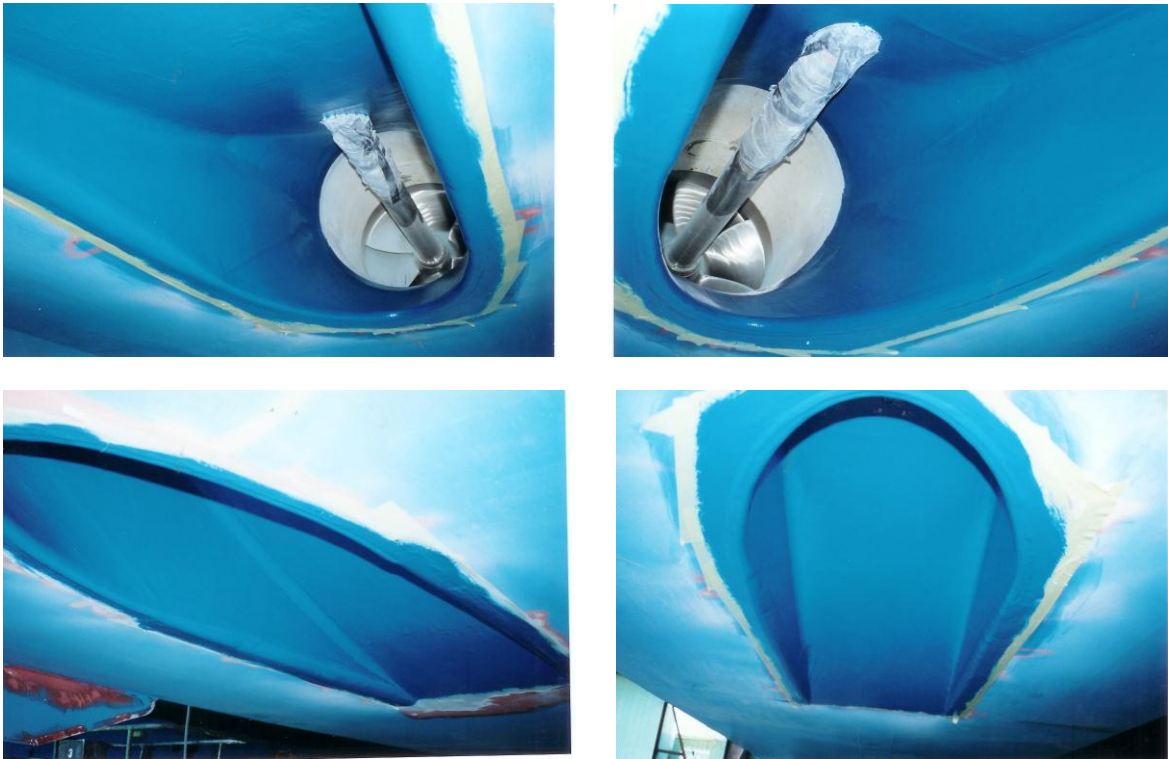




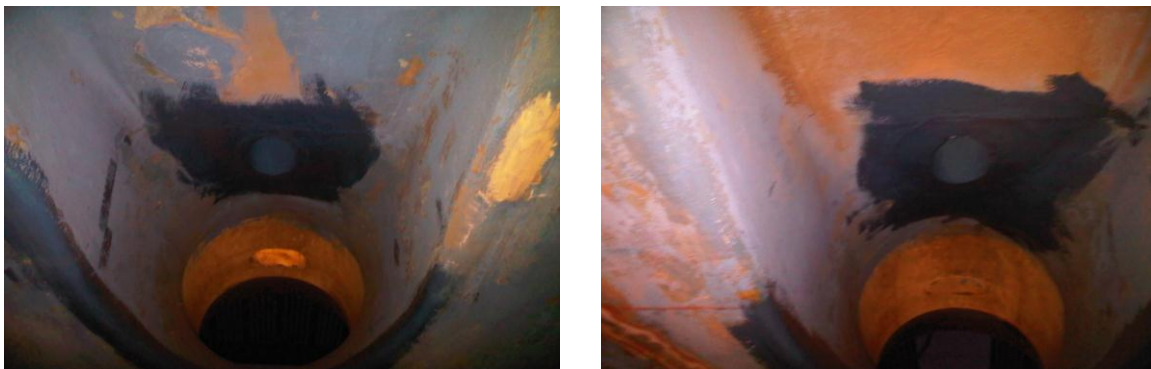
# ICE COATING CASE STUDY

The Klondike Express operates regularly in an ice environment in Alaska. Typically, while in operation, ice is sent through the jet tunnels at a very high velocity causing most, if not all, coatings to fail with subsequent damage to the aluminum substrate. Once coated with Blue Seal, the jet Tunnels are protected from abrasion and impact damage caused by the ice and normal debris.

**Pictures of Jet Tunnels – 3/14/2001**



**Pictures of Jet Tunnels – 3/14/2011**



*At this time the customer was changing the shaft seals and needed to install a new shaft tube to accommodate the new seals. Because of the heat of the welding, the Blue Seal needed to be touched up around the weld areas.*



*There were just a few small scrapes in the Blue Seal on the leading edges of the tunnels however no damage made it through the Blue Seal to the substrate.*

**As you can see, Blue Seal has a positive operational experience in ice conditions. In over ten years of service, Blue Seal has protected the aluminum from ice damage, cavitation and corrosion.**