WHAT IS TOUGH GUY?

SunStar, a leading manufacturer of unitized infrared tube heaters, has manufactured infrared heaters with heat treated-aluminized steel tubes since the 1980s. The benefits of heat treated tubes are as follows:

+ **Unsurpassed Corrosion Resistance:**

The heat treating process provides unsurpassed corrosion resistance to ferrous metal by providing a self-forming, self-healing coating of practically infusible alumina which is impervious to oxygen, carbon, sulphur and the products of combustion of natural and liquified propane gas. The aluminized steel tubing is heat treated up to 1400°F where the aluminum coating (supplied by aluminized steel) is fused into the tubing. The heat treating process forms a homogenous layer of iron-aluminum (Fe-Al), which is extremely oxidization resistant. Ideal for corrosive applications such as waste water treatment plants, car washes, dairy barns, swimming pools, and other high humidity applications

+ **Higher Operating Temperatures:**

This protective coating of the homogeneous alloy (Fe-Al) can withstand higher operating temperatures than other conventional tube materials (as certified by Armco Research and Technology Laboratories). The maximum operating emitter tube temperature is 1250°F.

+ **Higher Surface Emissivity:**

An additional benefit of the heat treating process is a greatly enhanced external surface emissivity as well as improved internal surface absorptivity. During the heat treating process, the surface morphology changes into a very rough and irregular surface, on a microscopic scale. The measured emissivity's vary from 0.80 to 0.86 depending on the emitter tube surface temperature. The dark homogenous Fe-Al layer also produces a very absorptive interior tube surface which is highly desirable from a heat transfer efficiency standpoint.

+ **Life Expectancy:**

The Tough Guy option is ideal for car washes, water treatment plants, greenhouses, swimming pools and other high humidity/corrosive environments. The life expectancy of heat treated-aluminized steel tubes is 20 years.