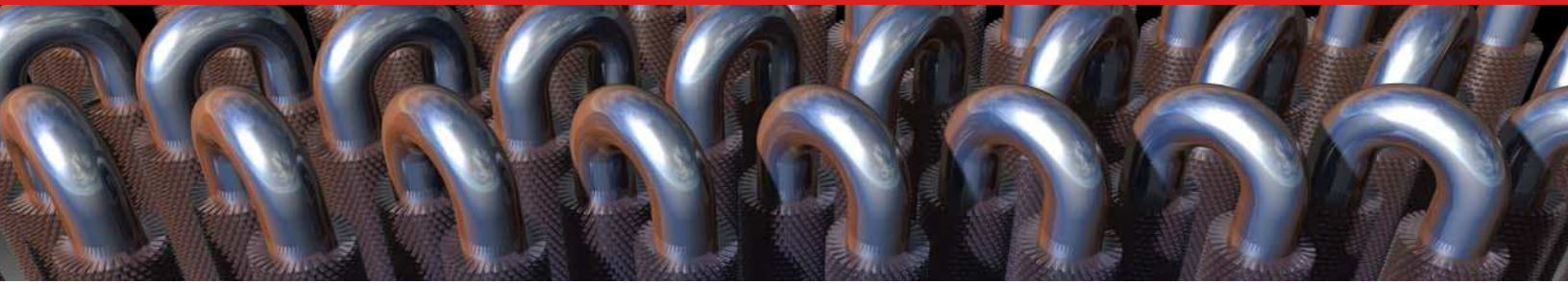


FIN TUBE HF SERRATED FIN

EXPERIENCE, QUALITY, AND CONSISTENCY FROM THE HEAT RECOVERY EXPERTS



Manufacture

TURB-X HF IS A SEGMENTED TYPE FIN MADE BY CUTTING THE FIN STRIP CROSSWISE AT CLOSE INTERVALS LEAVING AN UN CUT PORTION TO FORM A CONTINUOUS BASE FOR THE SEGMENTS. AS THE SEGMENTED FIN STRIP IS HELICALLY WOUND AND SIMULTANEOUSLY WELDED TO THE TUBE, THE INDIVIDUAL SEGMENTS SEPARATE AT THE OUTER EDGE FORMING INDIVIDUAL RECTANGULAR FINNS. SINCE THE FIN IS NOT STRETCHED OR COMPRESSED AS IT IS WOUND ON THE TUBE, THE GRAIN STRUCTURE, PHYSICAL PROPERTIES, CORROSION RESISTANCE AND THICKNESS OF TURB-X HF REMAINS BASICALLY THE SAME AS THE STARTING FIN STRIP.

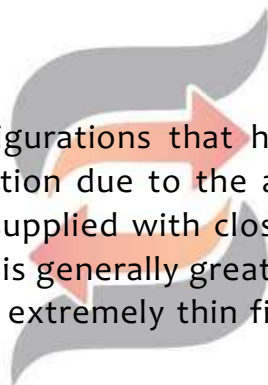
The Weld

THE FIN IS CONTINUOUSLY WELDED TO THE TUBE BY A HIGH FREQUENCY ELECTRICAL RESISTANCE WELDING PROCESS WHICH LEAVES THE TUBE ESSENTIALLY UNCHANGED METALLURGICALLY. HENCE, HEAT TREATING AFTER FINNING IS UNNECESSARY. THE WIDTH OF THE WELD IS ALWAYS GREATER THAN 90 PERCENT OF THE THICKNESS OF THE FIN, ASSURING A STRONG BOND BETWEEN THE FIN AND TUBE FOR EFFICIENT HEAT TRANSFER AND LONG LIFE.

**CERTIFIED TO ISO
STANDARDS**

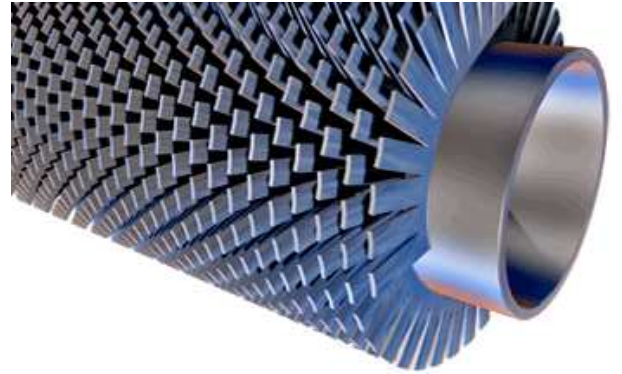
Greater Surface

There are certain TURB-X HF configurations that have greater total outside surface than the comparable SOLIDFIN HF configuration due to the additional surface of the segment edges. In addition, TURB-X HF can often be supplied with closer spaced, higher fins than SOLIDFIN HF so that the maximum surface available is generally greater with TURB-X HF than with SOLIDFIN HF. If design conditions require use of an extremely thin fin, note that thinner fins are available in the TURB-X SF section.



MAXIMIZED HEAT TRANSFER

INDEPENDENT RESEARCH AND FIELD PERFORMANCE CLEARLY DEMONSTRATE THE SUPERIOR HEAT TRANSFER OF THE SEGMENTED FIN OVER THE PLAIN FIN. CUTTING THE FIN SURFACE INTO SEGMENTS RESULTS IN A THINNER LAMINAR BOUNDARY LAYER ON THE FIN SURFACE AND INCREASED TURBULENCE IN THE FLUID FLOWING OVER THE SURFACE. THIS, IN TURN, SIGNIFICANTLY INCREASES HEAT TRANSFER WITHOUT A PROPORTIONATE INCREASE IN PRESSURE DROP.



TAKING A STAND FOR EXCELLENCE

Cleanability

YEARS OF OPERATING EXPERIENCE ON ALL TYPES OF FUELS HAVE DEMONSTRATED THE EASE OF CLEANING OF TURB-X HF. IN MOST CASES, SEGMENTED TYPE FINS ARE PREFERRED OVER PLAIN FINS BECAUSE THE SEGMENTS PERMIT LATERAL FLOW OF THE GAS DURING OPERATION AND THIS, ALONG WITH THE INCREASED TURBULENCE, SLOWS THE BUILDUP OF FOULING DEPOSITS. THESE SAME EFFECTS ALSO MAKE THE CLEANING OPERATION FASTER AND MORE EFFICIENT DURING SOOT BLOWING.

Strength

THE FINISHED FINNED TUBE IS EXCEEDINGLY STRONG MECHANICALLY AND HAS GREATER RESISTANCE TO BURSTING PRESSURE THAN THE BARE TUBE DUE TO THE REINFORCING EFFECT OF THE FIN. TURB-X HF IS GENERALLY MORE RIGID THAN TURB-X SF AND ONLY SLIGHTLY LESS RESISTANT TO MECHANICAL DEFORMATION THAN SOLIDFIN HF.



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