Features & Benefits







Jacketed Trough



Jacketed Trough Assembly



KWS Manufacturing

3041 Conveyor Drive Burleson, Texas 76028

Toll Free: (800) 543-6558 Phone: (817) 295-2247 Fax: (817) 447-8528

KWS Jacketed Troughs

KWS jacketed troughs increase process efficiencies, reduce wasted energy and shrink equipment footprints. It is very common in today's industry for a piece of equipment to serve more than one function. KWS jacketed troughs provide thermal processing while conveying a bulk material, sometimes eliminating another piece of process equipment. Even small improvements in efficiency can result in huge cost savings over time.

KWS jacketed troughs are used in a variety of applications. Whether cooling a bulk material exiting a dryer, preheating a powder with waste heat, maintaining the temperature of a delicate bulk material or even acting as a thermal insulator to protect personnel from heat, KWS jacketed troughs serve many useful functions.

KWS jacketed troughs are pressure vessels built on the outside of screw conveyor troughs. Hot oil, steam, cooling water and/or refrigerant can be used to heat or cool a bulk material as it is conveyed. KWS jacketed troughs are custom designed and manufactured in accordance with the ASME Boiler and Pressure Vessel Code for years of long, safe and reliable operation.

Features

FEA Designed– The proper design of jacketed troughs is important to meet process expectations. Many companies use "rule of thumb" guides or crude calculations to design jacketed troughs. Improperly designed jacketed troughs can fail and cause a serious safety concern. KWS uses Finite Element Analysis (FEA) on every jacketed trough design to ensure safe operation at the required pressure and temperature. FEA is a computer method for calculating stresses in 3-Dimensional parts. Unlike hand calculations, FEA can account for a wide range of parameters with exacting precision.

ASME Coded – KWS is certified to design and manufacture pressure vessels in accordance with the ASME Boiler and Pressure Vessel Code. You can be confident that every KWS jacketed trough exceeds the highest industry standards.

Wide Variety of Construction Materials– KWS jacketed troughs are available in many different materials of construction. Standard industrial applications with operating temperatures below 700-degrees F are typically constructed from carbon steel. 304, 316, Inconel, or duplex stainless steels are available for high temperature, corrosive, or food-grade applications.

Benefits

Cost Savings– Being able to cool or heat a bulk material as it is conveyed is very cost efficient and can eliminate the need for another piece of process equipment resulting in reduced capital and operating costs as well as shrinking the overall footprint. Using a KWS jacketed trough provides a lean process and years of reduced operating costs.

Safety – Proprietary heat transfer calculations, the use of FEA and designing in accordance with the ASME Boiler and Pressure Vessel Code ensures that every KWS jacketed trough is designed and manufactured for maximum heat transfer and reliable and safe operation

Cooling – Using process water or refrigerant is an efficient and cost effective method for cooling bulk materials at elevated temperatures exiting a dryer, kiln or boiler to a safe temperature for conveying throughout the remainder of the process. Personnel hazards due to high temperatures and thermal damage of downstream equipment are eliminated.









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www.kwsmfg.com

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Whether cooling, heating or providing a thermal barrier, KWS jacketed troughs provide increased process efficiency, a safe work environment and lower operating cost. Knowing that each KWS jacketed trough is designed and manufactured in accordance with the ASME Boiler and Pressure Vessel Code allows for peace of mind. Contact KWS today to find out more about this versatile product.