

Custom Coil Stock Wash System

ITS Job Profile

Steel Industry–Pretreatment for coating



Project Requirements

Replace a twenty four year old coil stock washer with the updated technology of an ITS cleaning system. The project scope required that ITS provide a dual source gas heating system for the solution tanks, incorporate advanced spray cleaning technology to eliminate the need for roller brush cleaning mechanisms, upgrade oil removal systems, automatic chemical monitoring and control, fully accessible roller assemblies for quick change over maintenance, and an updated electrical control systems package with remote connectivity. The project required removal of the old equipment and installation all new equipment.

Specification

Process steel coil stock through spray wash, chemical surface prep, rinse, and high velocity air strip moisture at the feed rate of 400 feet per minute.

Solution

Provide a fully featured all stainless steel six (6) stage spray cleaning system of custom design, that is complete with pre and post stage squeegee rollers and a high velocity air blow-off package to facilitate accelerated moisture removal from the coil stock upon exit. The new cleaning system featured an industry leading electrical controls package that included Ethernet connectivity for remote monitoring.

Results

The new washer has exceeded all project requirements and expectations.

- Oil removal is now accomplished in the first stage minimizing contamination to the pretreatment stages.
- The highly effective 99% oil removal system has improved cleaning and pretreatment solution clarity significantly reducing chemical usage.
- The improvement of cleaning and pretreatment solution clarity has eliminated the need for weekly solution tank dumping and extending the requirement beyond one month reducing maintenance and operating cost.
- Solution temperatures have been lowered from 180° F to 140° F reducing operating cost.



We look forward to partnering with you.
Contact ITS for a product proposal.
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ITS COIL STOCK CLEANING SYSTEM SPECIFICATIONS

Machine Footprint	133'-0" Long x 10'-0" Wide x 5'-9" High
Conveyor Height	42" High
Machine Construction	Stainless Steel
Solution Pumps	End Suction Centrifugal (Horizontal) Stainless Steel
Process Piping	Stainless Steel
Process Material Size	72" Wide x 16 Gauge
Production	400 Feet Per Minute
Wash Stages	600 GPM @ 175' HD
Rinse Stages	375 GPM @ 130' HD
Solution Tank Sizes	3X's Pump Capacity - Each
Heating Source	Natural Gas or Propane
Tank Heating	"Maxon" Burner, Immersed Tank Flue
Process Temperatures	Design @ 160° F - 190° F Maximum
Spray Nozzles	Stainless Steel, Removable, V-Jet
Wash Filtration	Inline Bag Type
Rinse Filtration	Inline Bag Type
Solution Containment	Squeegee Rollers (Upper & Lower) Each Stage
Oil Removal	"Suparator", Stage 1 & Stage 2
Blow-Off Air Strip	Pressure Blower, Multi-Hit Air Delivery @ 26" SP
Exhaust	Tubeaxial Type, Dual Arrangement
Electrical Control	Allen Bradley PLC & HMI
Control & Diagnostics	System Function, Process & Alarms Display @ HMI
Remote Connectivity	Ethernet
Chemical Control System	Stages 1, 2 & 3 – Concentration Monitoring & Control
Sound	<78 dBA

IMPROVEMENTS/ACCOMPLISHMENTS

- Remove the old system, installed the new system, and commissioned into production in less days than available in the plant shutdown window.
- Oil removal is now accomplished in the first stage minimizing contamination to the pretreatment stages.
- The highly effective 99% oil removal system has improved cleaning and pretreatment solution clarity significantly reducing chemical usage.
- The realized improvement of cleaning and pretreatment solution clarity has eliminated the need for weekly solution tank dumping and extending the requirement beyond one month reducing maintenance and operating cost.
- Spray cleaning is now so effective that solution temperatures have been lowered from 180° F to 140° F reducing operating cost.
- The gas heating systems, which were designed to operate using natural gas or propane, allow operation from an alternate supply (propane) during the on-peak times of the natural gas provider, which allows the customer to take advantage of a rate discount.