

Documentation Level 2 System
Operator Handbook
D1 - Introduction



# **D1 - Introduction**

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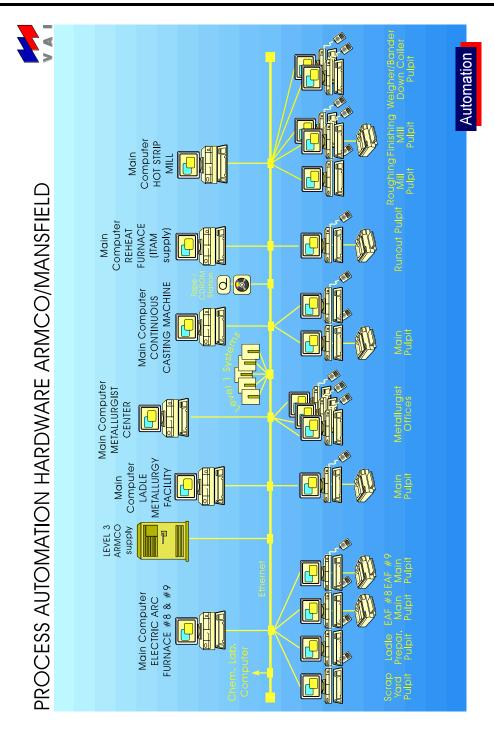
## 1. Process Automation Hardware

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# 2. Process Automation Application Software

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Automation



# COOLING SECTION SETUP pass schedule calculation adaption of model parameter DYNAMIC MILL SETUP PROFILE & FLATNESS CONTROL thermal crown wear of rolls - cooling pattern setup PROCESS AUTOMATION APPL. SOFTWARE ARMCO/MANSFIELD - calculation of slab temperature profile - furnace temperature control per heating (ITAM supplies the complete L2 system for the RHF) THERMAL MODEL zone delay handling COMMON BASIC FUNCTIONS - Plan Data Acquisition - Graphical User Interface - Material Tracking - Product Reporting - Setpoint Control - Network Communication PROCESS MODELS CUT LENGTH OPTIMIZATION METALLURGICAL MODEL COMPUTER AIDED QUALITY - allov/deoxidation/ ASSURANCE (CAQA) determination of prod. practices detection of prod. deviations - online temp, profile calculation - surface temperature control DYNAMIC SECONDARY COOLING (DYNACS) considering customers requ. minimizing amount of scrap - alloy/deoxidation/ desulphurization - actual heat status determination THERMAL MODEL - temperature supervision (cyclic & acyclic) - alloy/deoxidation/ desulphurization for tapping oxygen calculation for decarburization, chemical heating & chromium reduction foamy slag METALLURGICAL MODEL THERMAL MODEL - temperature supervision - energy input calculation

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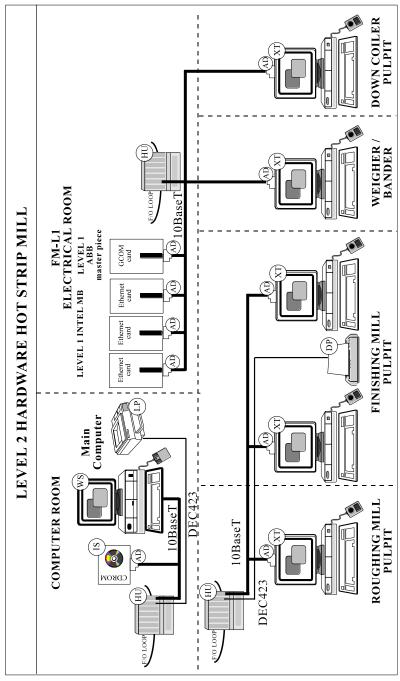
# 3. Level 2 Hardware Hot Strip Mill

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## 4. Process Computer Functions & Models

# ARMCO Hot Strip Mill Function Overview Level 2



### SET-UP ROUGHING MILL Loo-up Refence Tables

#### SET-UP FINISHING MILL

Rolling Strategy

Pass Schedule Calculation

Temperature Model

Adaption of Model Parameters

#### MATERIAL TRACKING

Reheat Furnace (passive)

Primary Edger

Roughing Mill Area

Finishing Mill

**Cooling Section** 

**Down Coiler** 

#### VISUALIZATION and REPORTWRITING

#### COMMUNICATION

**Basic Automation System** 

Furnace Computer & CC-Computer

Level 3 System

#### DATA MANAGEMENT

#### Automation

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## 5. Revision and Document Distribution List

<u>REVISION LIST</u>					
Date	Version	Author	Description		
94-Dec-05	V1.0	F.Dvo.	first draft		
95-Jan-30	V1.1	F.Dvo.	final version		
95-Dec-30	V1.2	F.Dvo.	revision		
96-Feb-28	as built	F.Dvo.	as built		

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