

INSIDE
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STEEL INDUSTRY 5.0

INDUSTRIA SIDERÚRGICA 5.0

COMPANY OVERVIEW

a de Polytec

Pioneering automation and robotics in critical industrial processes for over three decades

Polytec is an Italian company that has been developing **automation** systems and **robotics** for critical industrial processes for over 30 years.

The synergy between Polytec and the other companies of **BM Group**, an industrial group with over 350 direct employees, has enabled Polytec to establish itself as a leading international **integrator of systems** to pursue the digital and energy transition of industry.

Polytec intralogistics: specialised in the development of tailor-made intralogistics solutions.

Hydroalp: EPC contractor for green hydrogen production and hydropower plants.

Pioneros en automatización y robótica para procesos industriales críticos desde hace más de tres décadas

Polytec es una empresa italiana que lleva más de 30 años desarrollando sistemas de **automatización** y **robótica** para procesos industriales críticos.

La sinergia entre Polytec y las demás empresas de **BM Group**, un grupo industrial con más de 350 empleados directos, ha permitido a Polytec consolidarse como un **integrador de sistemas líder internacional** para impulsar la transición digital y energética de la industria.

Polytec Intralogistics: especializada en el desarrollo de soluciones intralogísticas a medida.

Hydroalp: contratista EPC para la producción de hidrógeno verde y plantas hidroeléctricas.

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OUR COMPETENCIES

ELECTRICAL AND AUTOMATION SYSTEMS

1. Electrical engineering
2. Automation panels
3. Distribution boards
4. Customized on-board machine
5. Industrial control software
6. Product and production tracking platforms
7. Technological packages
8. Service and After Sales

PLANT ENGINEERING

1. Conceptualization and feasibility study
2. Engineering design
3. Procurement and materials management
4. Construction and installation
5. Commissioning and startup
6. Operations and maintenance
7. Continuous improvement and optimization

INDUSTRIAL ROBOTICS

1. Feasibility studies with 3D acquisition of cloud of points
2. Engineering and 3D drawings
3. Robotic simulation
4. Electrical and software development
5. Electrical and mechanical manufacturing
6. Assembly and construction
7. Software development
8. Internal cold commissioning
9. Factory Acceptance Test
10. Installation and hot commissioning
11. Training
12. Service and After Sales

Some of our best seller robot applications:

Temperature and sampling | Quality control |
Skimming and cleaning | Marking and tagging
| Handling and palletizing | Bending | Welding
| Tailor made mechatronic projects

TECHNOLOGY
TRAINING
CENTER ●●●

OUR MOTTO

FROM
OPERATOR



TO
SUPERVISOR

MARKETS WE SERVE

Aluminum | Cement | Energy | Environment | Infrastructures | Intralogistics | Mining |
Marine & naval | Oil & gas | Petrochemical | Pharmaceutical | Plastics & rubber | Pulp
& paper | Renewables | **Steel** | Stone & Tile | Textile

CERTIFICATIONS

ISO 9001/14001
ISO 50001 Energy
ISO 45001 Safety
UL 508A/CSA 22.2

PARTNERSHIPS

Rockwell Gold O&M Partner
Siemens solution partner Factory Automation
Siemens solution partner Drives and motion
ABB value provider



GOLD
OEM Partner
ROCKWELL AUTOMATION

ABB

—
VALUE
PROVIDER

Solution
Partner
Automation
Drives

SIEMENS

We make the **steel industry** attractive for **future generations**

Let's dress together your steel mill

SAFETY **EFFICIENCY** **QUALITY**

GREEN ENERGY PRODUCTION

- Photovoltaic systems
- Engineering, Procurement, Construction
 - Power Purchase Agreement on-site
 - Power Purchase Agreement off-site

- Green hydrogen
- Turnkey plants
 - Plug & play solutions - H2ALP
 - Plant auxiliary systems

INTRALOGISTICS, AMR & SMART WAREHOUSES

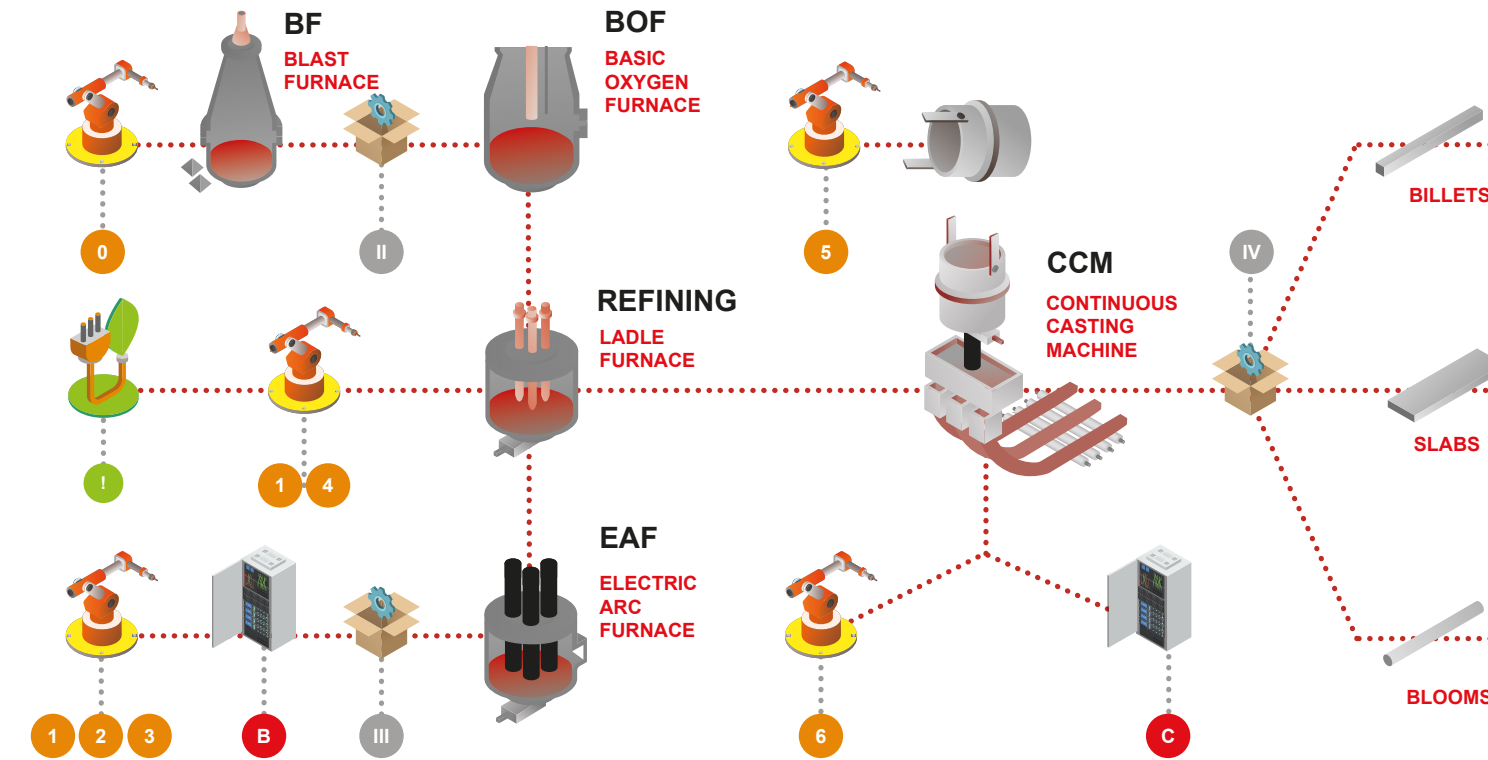
- AGV/AMR platforms
- AGV forklifts
- Navigation systems
- Intralogistics customized solutions
- Platform interconnected with customer's ERP



ELECTRICAL AND AUTOMATION EQUIPMENT

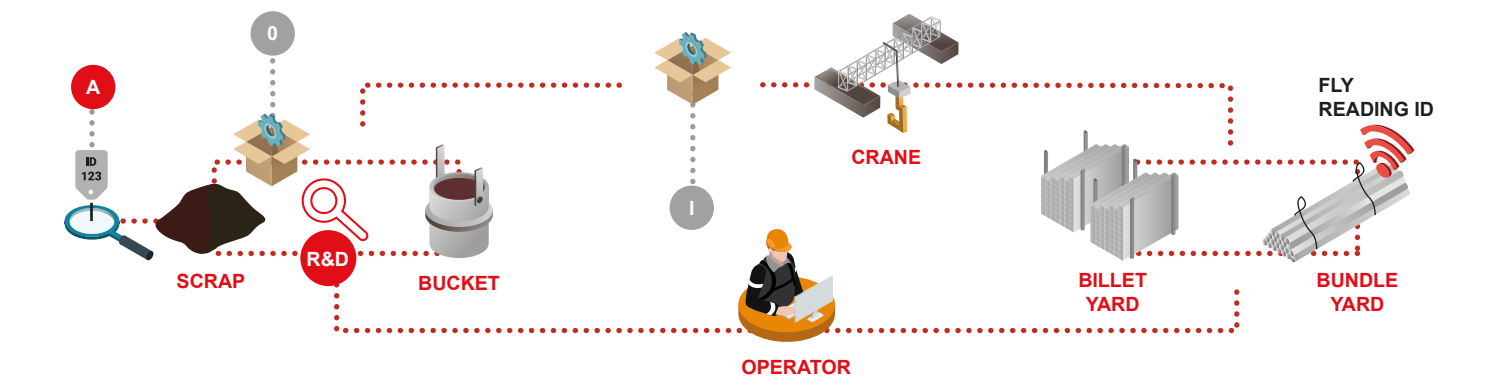
- Electrical systems
- Process automation
- Machine retrofitting
- Plant revamping
- DCS-controlled systems

MELTSHOP



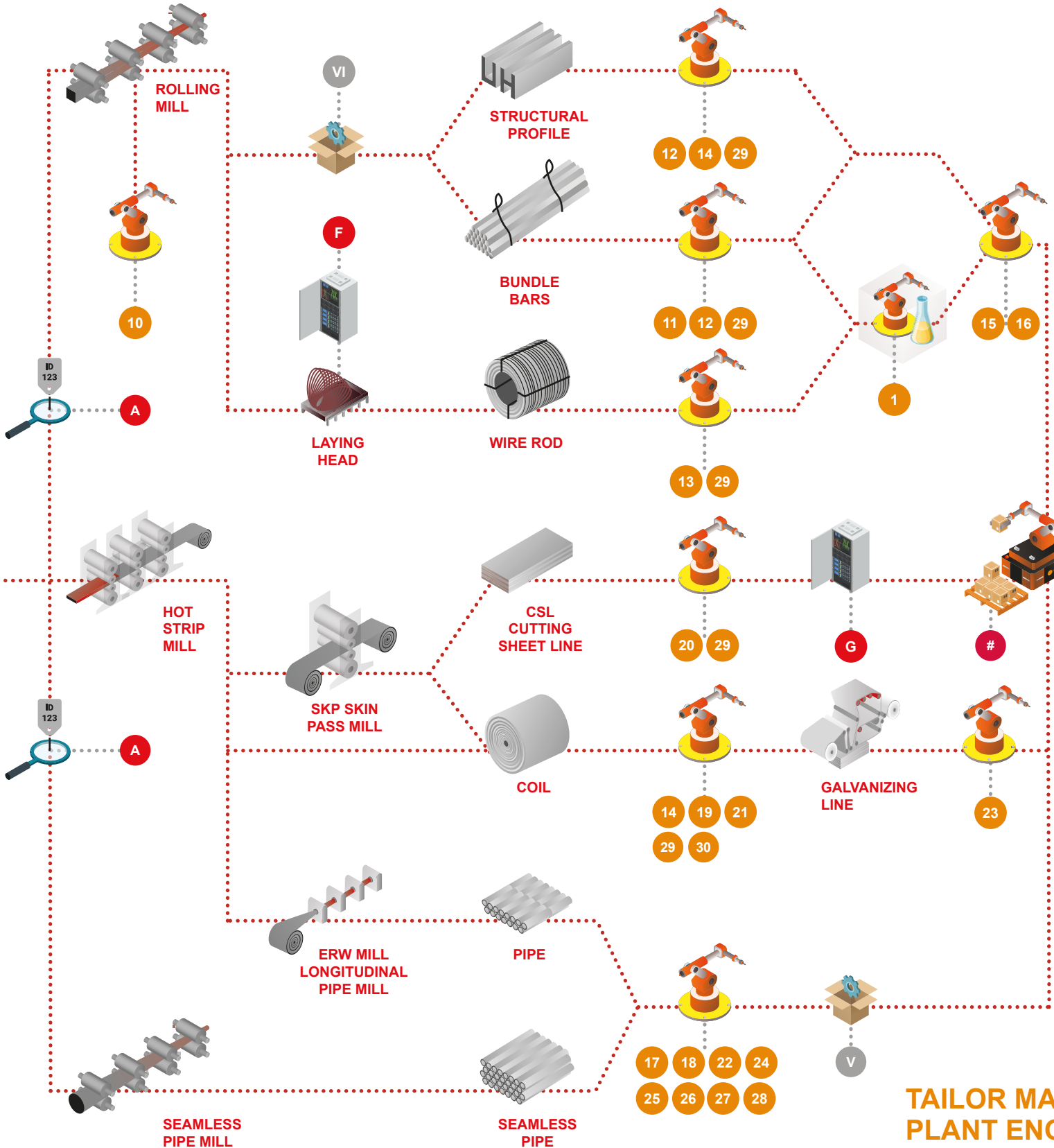
SEMI-FINISHED PRODUCTS

7 8 9 D ! # *



SCRAP YARD

A 0 I ! # *



LONG PRODUCTS



1 10 11 12 13 14 15 16 A E F VI ! # *

FLAT PRODUCTS, TUBE & PIPE



14 17 18 19 20 21 22 23 24 25 26 27 28 29 A G V ! # *

TAILOR MADE MECHATRONICS & PLANT ENGINEERING

Thanks to our multidisciplinary expertise, we develop complex mechatronic projects and greenfield plants based on customer requirements.

PolySAMPLE BF/BOF0
Automatic temperature measurement and sampling robot for BF/BOF Robot automático para medición de temperatura y toma muestra para BF/BOF

PolyLAB1
Automatic cell for the preparation and analysis of steel samples Celda robotizada para la preparación y el análisis de muestras de acero

PolySAMPLE EAF2
Automatic temperature measurement and sampling robot for EAF Robot automático para medición de temperatura y toma muestra para EAF

PolyEBT/SPOUT3
Automatic robot for EBT/SPOUT lancing and cleaning on EAF Robot para lanza y limpieza automática EBT-SPOUT en EAF

PolySAMPLE4
Automatic temperature measurement and sampling robot for refining area Robot automático para medición de temperatura y toma muestra para refinerías

PolyLADLE5
Robotic cell for ladle sliding gate maintenance Celda robotizada para el mantenimiento de la puerta cuchara

PolyCAST6
Multi-tool robotic solution for continuous casting machines Soluzione robotica multi-utensile per colata continua

PolyTAG BLE7
Robotic cell for automatic hot product tagging Celda robotizada para el etiquetado de productos calientes

PolyMARK B8
Automatic robot for slab and billet marking Robot de marcado de slab y palanquilla

PolyREAD9
Billet identification system before the entry into re-heating furnace Sistema de identificación de palanquillas antes de entrar en el horno de recalentamiento

PolyGAP10
Robotic system for profile measurement between stands in a rolling mill process Sistema robotizado de medición de perfiles entre jaulas de laminación

PolyTEST11
Cooling bed sampling robot Robot de corte y recogida de muestras en la placa de enfriamiento del laminador

PolyTAG FC12
Automatic robot for bundle bar tagging Robot automático para el etiquetado de paquetes de barras

PolyTAG V13
Automatic robot for wire rod tagging Robot automático para el marcado de bobina de alambón

PolyPROBE14
Robotic cell for hot/cold profile sample cutting Celda robotizada para el corte de muestras de perfiles calientes/ fríos

PolyARC15
Automatic cell for ARC and SPARK chemical analysis of steel bars Celda robotizada de análisis químico ARC y SPARK de barras de acero

PolyMARK16
Downstream product marking system Sistema de marcado de productos

PolyTAG T17
Automatic robot for tube bundle tagging Robot automático para etiquetado de paquetes de tubos

PolyMARK T18
Robotic cell for pipe marking Celda robotizada de marcado de tubos

PolyMARK C19
Robotic cell for coil marking Celda robotizada para el marcado de bobinas

PolyMARK L20
Robotic cell for flat product marking Celda robotizada para el marcado de productos planos

PolyDESTRAPING21
Robotic cell for destrapping Celda robotizada para desflejado

PolyBUNDLE22
Robotic cell for the automatic bundling of steel products Celda robotizada para el envasado automático de productos siderúrgicos

PolySKIM23
Automatic robot for skimming and dross removal for zinc bath Robot automático para el desnatado del baño de zinc

PolyGREASE24
Robotic cell for the application of grease on thread Celda robotizada para la aplicación de grasa en el roscado

PolyMAN25
Robot for application and pre-screwing of couplings on threaded seamless pipes Celda robotizada para aplicación y pre atornillado de manguitos en tubería sin soldadura

PolyPRO26
Robot for screwing protectors on threaded seamless pipes Celda para atornillado de protectores en tubos roscados sin soldadura

PolyCAP27
Robotic cell for cap application on seamless pipes Celda robotizada para la aplicación de tapas en tubos sin soldadura

PolyMARK M28
Robotic cell for seamless pipe coupling marking Celda robotizada para el marcado de manguitos en tubos sin soldadura

PolyMOVE29
Robotic cell for product handling and palletizing or depalletizing Celda robotizada para manipulación de productos y paletizado/depaletizado

PolyDESLAGGING30
Robotic cell for deslagging cycle Celda robotizada para el ciclo de deslagging

ActiveTRACKINGA
Global tracking system Sistema de tracking global

ActiveARCB
3-phase EAF/LF electrodes arc control system Sistema de control de los electrodos EAF/LF

ActiveCASTC
Continuous casting machine (CCM) control and automation system Control de proceso de la colada continua

ActiveRHFD
Process control and automation system for reheating furnace Control de proceso del horno de calentamiento

ActiveROLLE
Rolling mill control and automation system Control del proceso y automatización de la laminación

LEGEND/LEYENDA



ROBOTIC CELL
CELDA ROBÓTICA



AUTOMATION PLATFORM
PLATAFORMA DE AUTOMATIZACIÓN



TECHNOLOGICAL PACKAGE
PAQUETE TECNOLÓGICO

ActiveHEADF
Wire-rod laying head bar synchronization Sistema regulación formador de espiras

ActiveSHEARG
Shear control system Sistema de control cizallas

PolySCRAPO
System for scrap yard 3D volume mapping Sistema para el mapeo 3D del volumen del parque de chatarra

PolyCRANEI
Automatic unmanned crane guidance system Sistema de conducción automática de la grúa

ActiveCAST IRONII
System for cast iron temperature measurement in the blast furnace Medición de la temperatura del hierro fundido de alto horno

PolySLAGIII
Slag detection system for remote tapping Sistema de detección de escoria

PolyTRACKIV
Tracking and vision system for hot products Trazabilidad y sistema de visión para productos calientes

PolySCANV
System for automatic defect identification Sistema de identificación automática de defectos

PolyCHECKVI
Bar straightness control Control de rectitud de barras

FUTURE
INSIDE FUTURE
FUTURE



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