

INSIDE
FUTURE
INSIDE

STEEL INDUSTRY 5.0

INDUSTRIA SIDERURGICA 5.0

COMPANY OVERVIEW

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.

Nyox: supplies industrial photovoltaic plants also through on-site and off-site PPA, thanks to its collaboration with Edison Next.

Pionieri nell'automazione e nella robotica dei processi industriali critici da oltre tre decenni

Polytec è un'azienda italiana che da oltre 30 anni sviluppa sistemi di **automazione** e **robotica** per processi industriali critici.

La sinergia tra Polytec e le altre aziende di **BM Group**, gruppo industriale con oltre 350 collaboratori diretti, le ha permesso di affermarsi come system integrator leader a livello internazionale per perseguire la transizione digitale ed energetica dell'industria.

Polytec intralogistics: specializzata nello sviluppo di soluzioni di intralogistica tailor-made.

Hydroalp: EPC contractor per impianti di produzione di idrogeno verde e idroelettrici.

Nyox: realizza impianti fotovoltaici industriali anche attraverso la formula di PPA on-site e off-site, grazie alla collaborazione con Edison Next.

BRANCH OFFICES



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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 |
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**

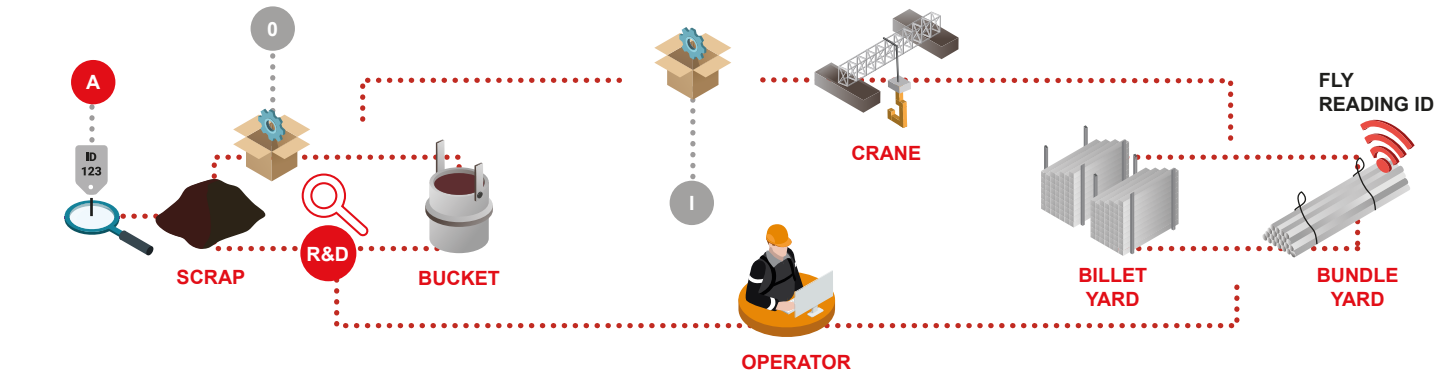
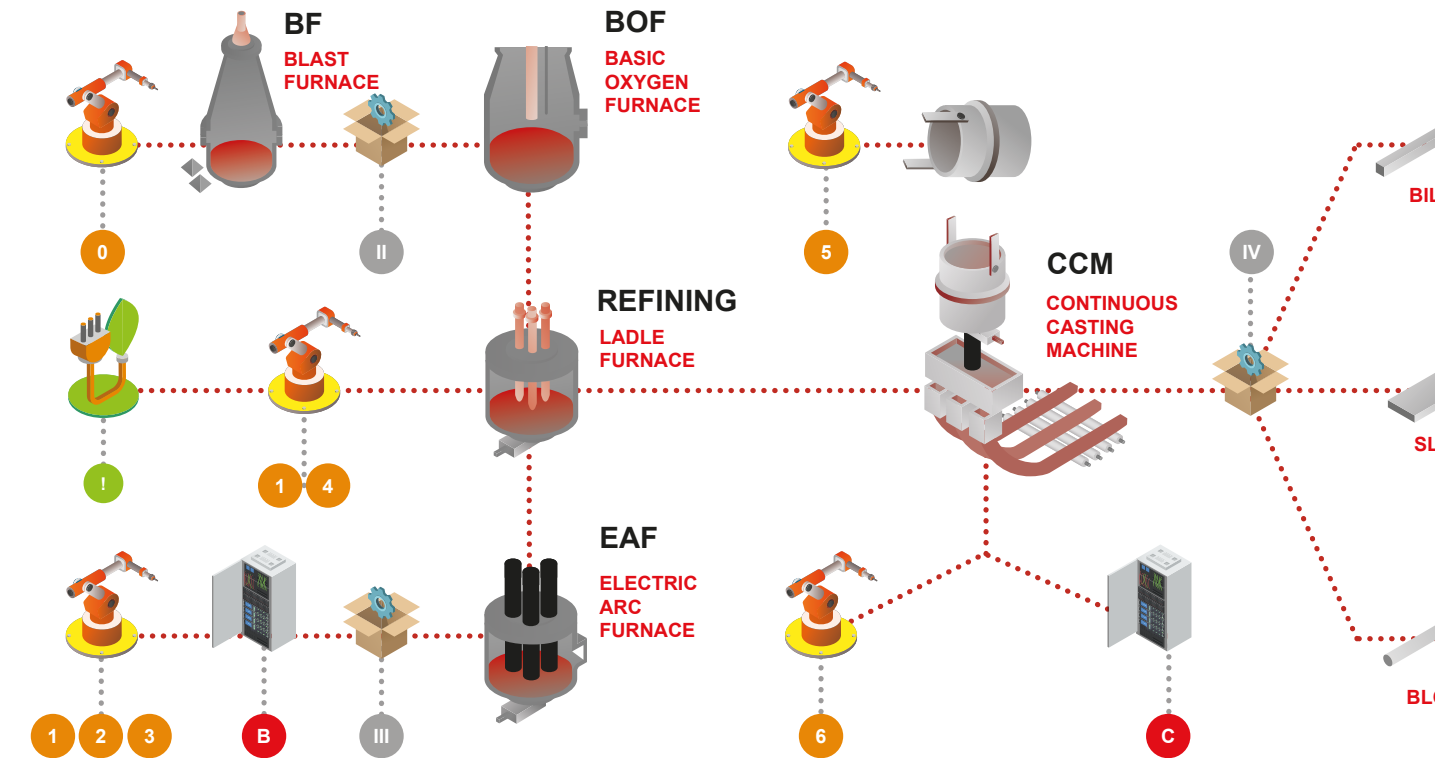
**PIANO
TRANSIZIONE 5.0**



MELTSHOP



0 1 2 3 4 5 6
B C II III IV I #
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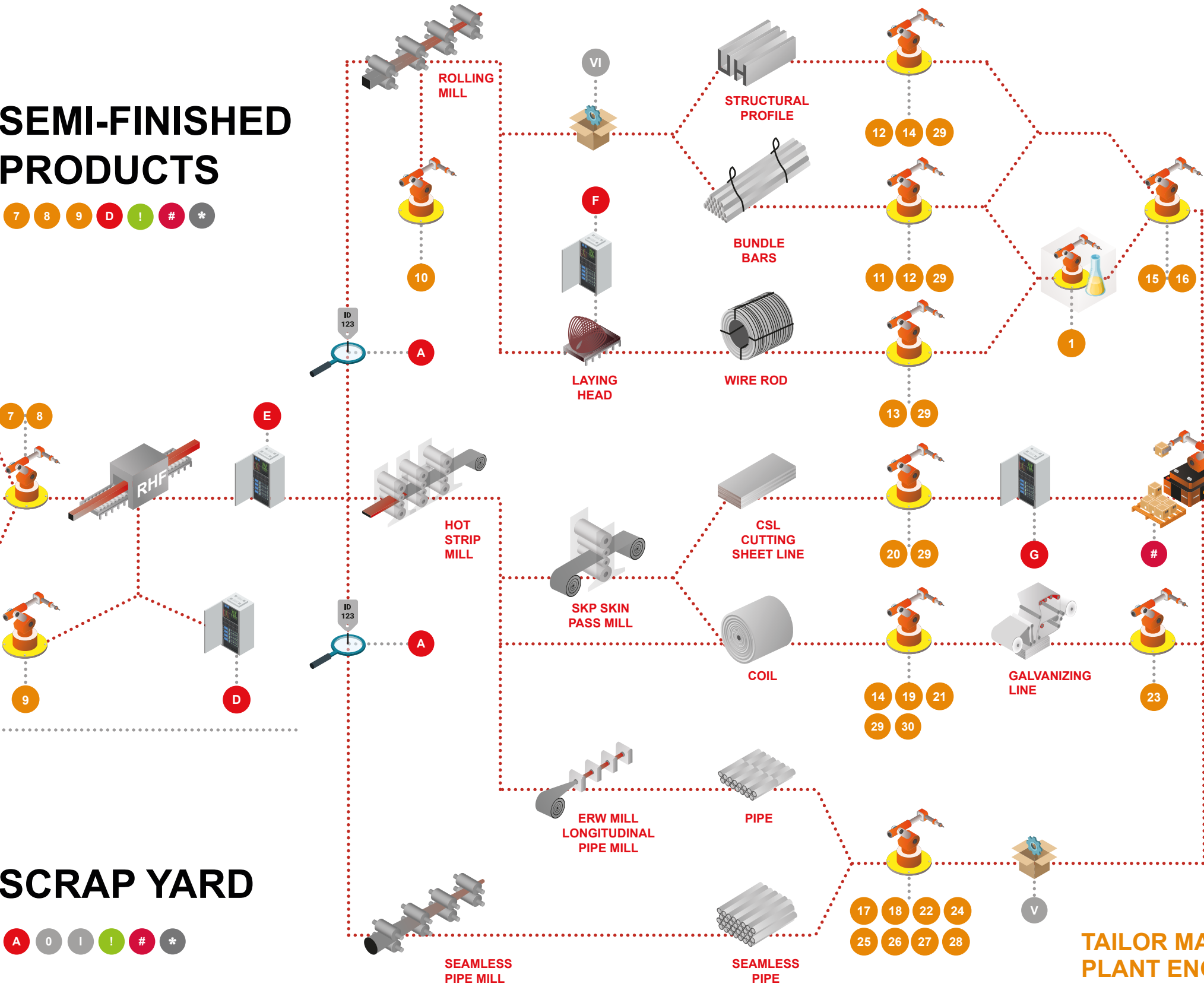


SEMI-FINISHED PRODUCTS

7 8 9 D I # *

SCRAP YARD

A 0 I I # *



LONG PRODUCTS



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

FLAT PRODUCTS, TUBE & PIPE



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

ELECTRICAL AND AUTOMATION EQUIPMENT

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

INTRALOGISTICS, AMR & SMART WAREHOUSES

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



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

TAILOR MADE MECHATRONICS & PLANT ENGINEERING

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

PolySAMPLE BF/BOF 0
Automatic temperature measurement and sampling robot for BF/BOF
Robot automatico per misurazione temperatura e campionamento per BF/BOF

PolyLAB 1
Automatic cell for the preparation and analysis of steel samples
Isola robotizzata per la preparazione e l'analisi di campioni di acciaio

PolySAMPLE EAF 2
Automatic temperature measurement and sampling robot for EAF
Robot automatico per misurazione temperatura e campionamento per EAF

PolyEBT/SPOUT 3
Automatic robot for EBT/SPOUT lancing and cleaning on EAF
Robot automatico per apertura e pulizia EBT/SPOUT su EAF

PolySAMPLE 4
Automatic temperature measurement and sampling robot for refining area
Robot automatico per misurazione temperatura e campionamento per area di raffinazione

PolyLADLE 5
Robotic cell for ladle sliding gate maintenance
Isola robotizzata per la manutenzione del casetto siviera

PolyCAST 6
Multi-tool robotic solution for continuous casting machines
Soluzione robotica multi-utensile per colata continua

PolyTAG BLE 7
Robotic cell for automatic hot product tagging
Isola robotizzata per l'etichettatura prodotti caldi

PolyMARK B 8
Automatic robot for slab and billet marking
Robot per marcatura bramme e billette

PolyREAD 9
Billet identification system before the entry into re-heating furnace
Sistema di identificazione delle billette prima dell'ingresso nel forno di riscaldamento

PolyGAP 10
Robotic system for profile measurement between stands in a rolling mill process
Sistema robotizzato per la misura del profilo tra gabbie in un processo di laminazione

PolyTEST 11
Cooling bed sampling robot
Robot per il taglio e prelievo provino sulla placca di raffreddamento del laminatoio

PolyTAG FC 12
Automatic robot for bundle bar tagging
Robot automatico per etichettatura di fasci di barre

PolyTAG V 13
Automatic robot for wire rod tagging
Robot automatico per etichettatura vergelle

PolyPROBE 14
Robotic cell for hot/cold profile sample cutting
Isola robotizzata per taglio provino di profili caldi/freddi

PolyARC 15
Automatic cell for ARC and SPARK chemical analysis of steel bars
Isola robotizzata di analisi chimica ARC e SPARK delle barre di acciaio

PolyMARK 16
Downstream product marking system
Sistema di marcatura prodotti downstream

PolyTAG T 17
Automatic robot for tube bundle tagging
Robot automatico per etichettatura dei fasci di tubi

PolyMARK T 18
Robotic cell for pipe marking
Isola robotizzata per la marcatura di tubi

PolyMARK C 19
Robotic cell for coil marking
Isola robotizzata per la marcatura coil

PolyMARK L 20
Robotic cell for flat product marking
Isola robotizzata per la marcatura di prodotti piani

PolyDESTRAPPING G 21
Robotic cell for destrapping
Isola robotizzata per il taglio delle regge

PolyBUNDLE 22
Robotic cell for the automatic bundling of steel products
Isola robotizzata per il confezionamento automatico di prodotti di acciaio

PolySKIM 23
Automatic robot for skimming and dross removal for zinc bath
Robot automatico per la scorifica del bagno di zinco

PolyGREASE 24
Robotic cell for the application of grease on thread
Isola robotizzata per l'applicazione del grasso sul filetto

PolyMAN 25
Robot for application and pre-screwing of couplings on threaded seamless pipes
Robot automatico per applicazione e pre avvitamento di manicotti su prodotto finito

PolyPRO 26
Robot for screwing protectors on threaded seamless pipes
Robot per avvitatura protettori su tubi filettati senza saldatura

PolyCAP 27
Robotic cell for cap application on seamless pipes
Isola robotizzata per l'applicazione di tappi su tubi senza saldatura

PolyMARK M 28
Robotic cell for seamless pipe coupling marking
Isola robotizzata per la marcatura dei giunti per tubi senza saldatura

PolyMOVE 29
Robotic cell for product handling and palletizing or depalletizing
Cella robotica per la movimentazione dei prodotti e la pallettizzazione o depallettizzazione

PolyDESLAGGING 30
Robotic cell for deslagging cycle
Cella robotizzata per il ciclo di deslagging

ActiveTRACKING A
Global tracking system
Sistema di tracking globale

ActiveARC B
3-phase EAF/LF electrodes arc control system
Sistema di controllo degli elettrodi EAF/LF trifase

ActiveCAST C
Continuous casting machine (CCM) control and automation system
Controllo di processo e automazione della colata continua

ActiveRHF D
Process control and automation system for reheating furnace
Controllo di processo e automazione del forno di riscaldamento

ActiveROLL E
Rolling mill control and automation system
Controllo processo e automazione del laminatoio

LEGEND/LEGENDA



ROBOTIC CELL
ISOLA ROBOTIZZATA



AUTOMATION PLATFORM
PIATTAFORMA DI AUTOMAZIONE



TECHNOLOGICAL PACKAGE
PACCHETTO TECNOLOGICO

ActiveHEAD F
Wire-rod laying head bar synchronization
Sistema regolazione formaspire

ActiveSHEAR G
Shear control system
Sistema di controllo cesoie

PolySCRAP O
System for scrap yard 3D volume mapping
Sistema per la mappatura 3D del volume del parco rottami

PolyCRANE I
Automatic unmanned crane guidance system
Sistema di guida automatica della gru senza equipaggio

ActiveCAST IRON II
System for cast iron temperature measurement in the blast furnace
Sistema di misurazione temperatura della ghisa nell'altoforno

PolySLAG III
Slag detection system for remote tapping
Sistema di rilevamento scoria per lo spillaggio remoto

PolyTRACK IV
Tracking and vision system for hot products
Sistema di tracking e visione di prodotti caldi

PolySCAN V
System for automatic defect identification
Sistema per identificazione automatica difetti

PolyCHECK VI
Bar straightness control
Controllo rettilineità barre

FUTURE
INSIDE FUTURE
FUTURE

