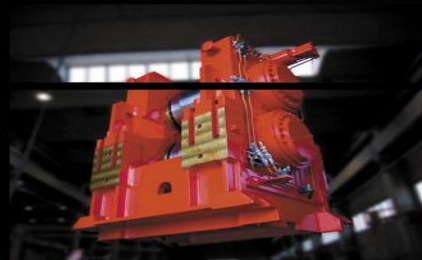
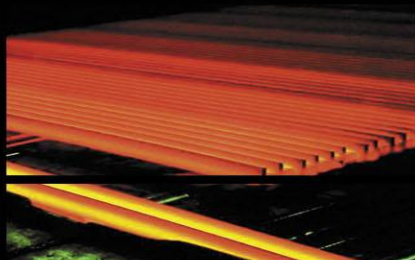
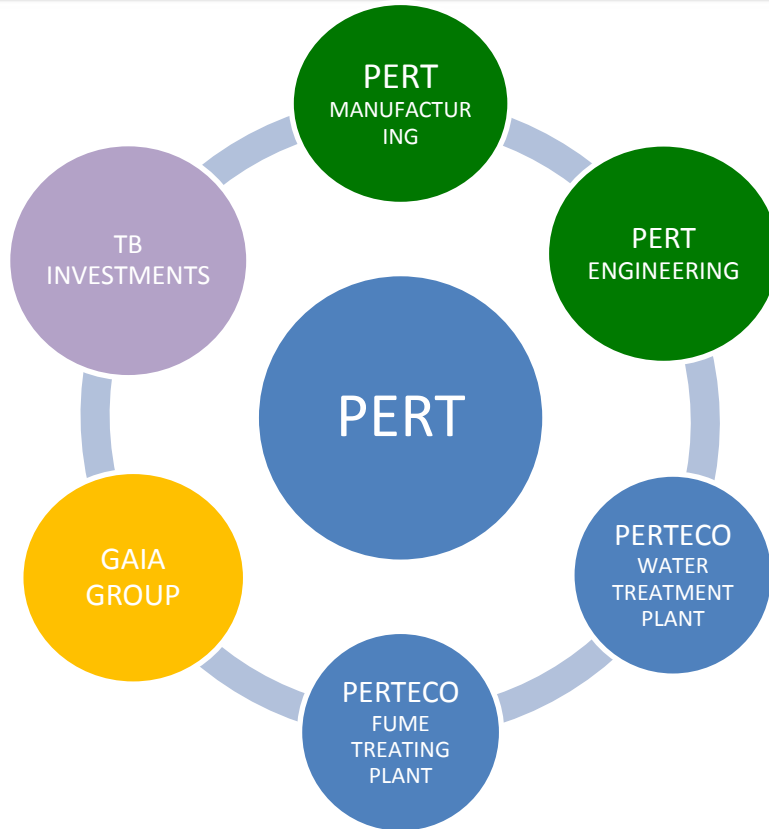


 **PERT**

COMPANY PRESENTATION



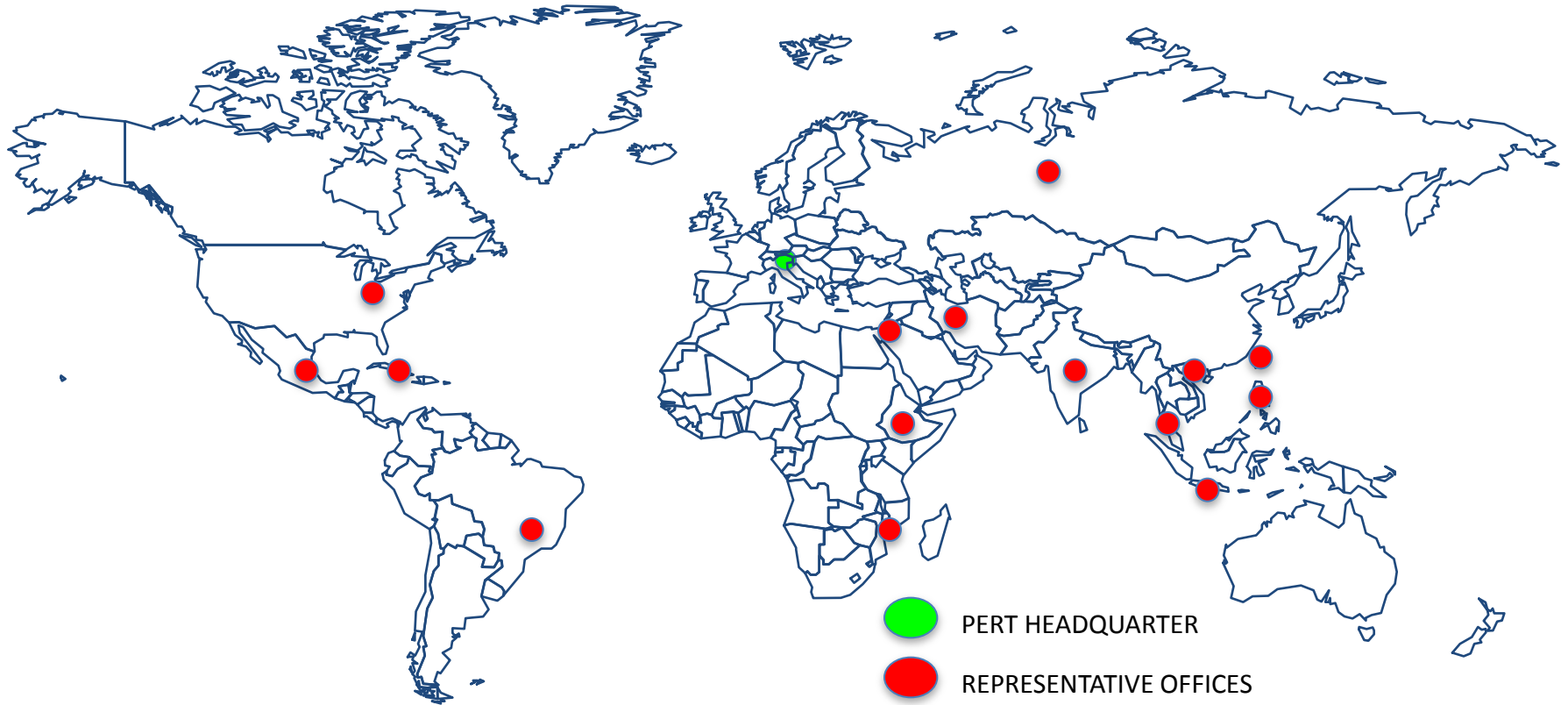


- PERT Manufacturing
- PERT Engineering
- PERTECo WTP
- PERTECo FTP
- GAIA Group
- TB Investments

WHERE WE ARE - HEADQUARTER



WHERE WE ARE - WORLDWIDE



COMPANY' S HISTORY AND MAJOR MILESTONES

□ 1990

PERT engineering has been established in the early 1990s, relying on the long-term experience and solid expertise of its founder, **Claudio Tomba**. The aim was to offer qualified engineering support covering both design and project management, for customers planning to invest in new installations and/or in the modernisation of existing units.



□ 1990 - 2001

- BASIC AND DETAIL ENGINEERING FOR :
 - Rolling Mill Equipment
 - Steel Meltshop Equipment
 - Auxiliary Plants
- OVERHAULING AND RESELLING OF SECOND HAND EQUIPMENT

□ 2001 - 2003

- FIRST “TURN KEY” BAR MILL
- FIRST CCM FOR BILLETS
- FIRST “TURN KEY” WATER TREATMENT PLANT
- EXISTING PLANTS UPGRADING ACTIVITIES

□ 2003 - 2005

- FIRST SMALL SECTION ROLLING MILL
- FIRST FINISHING BLOCKS FOR WIRE ROD
- “TAILOR-MADE” COOLING BED SOLUTION FOR QUALITY STEEL ROUNDS PRODUCTION
- FIRST GRINDING BALL ROLLING MILL

□ 2006

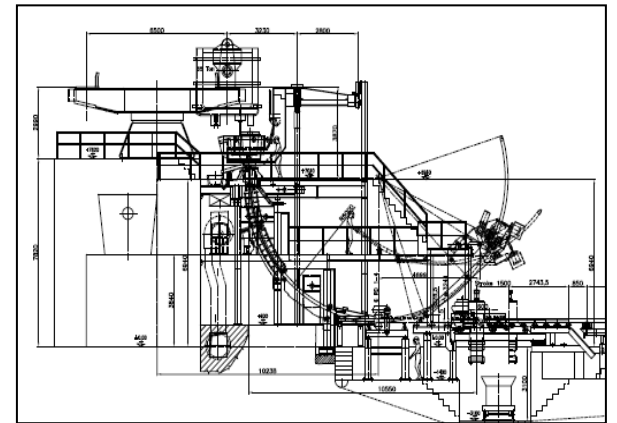
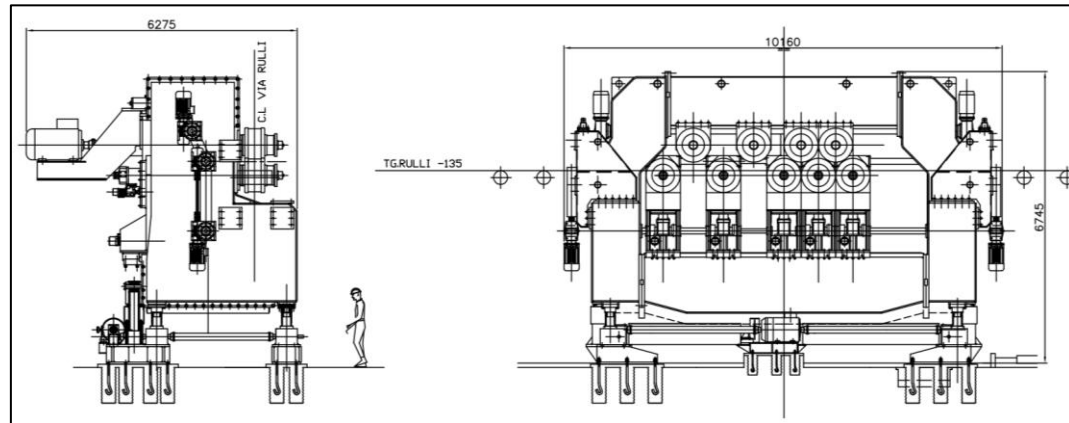
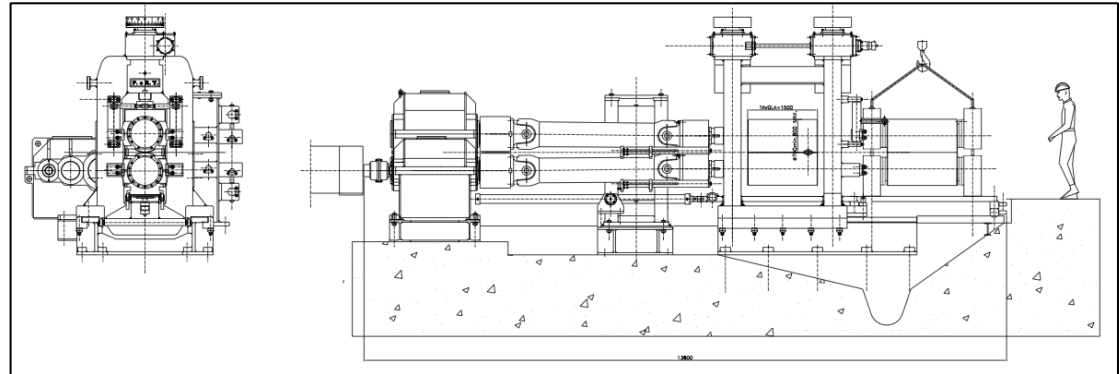
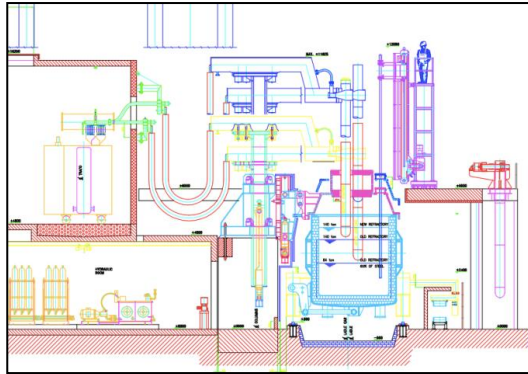
- ESTABLISHMENT of
 - **PERTECO** - PERT Environmental Division
 - **TB** Investments



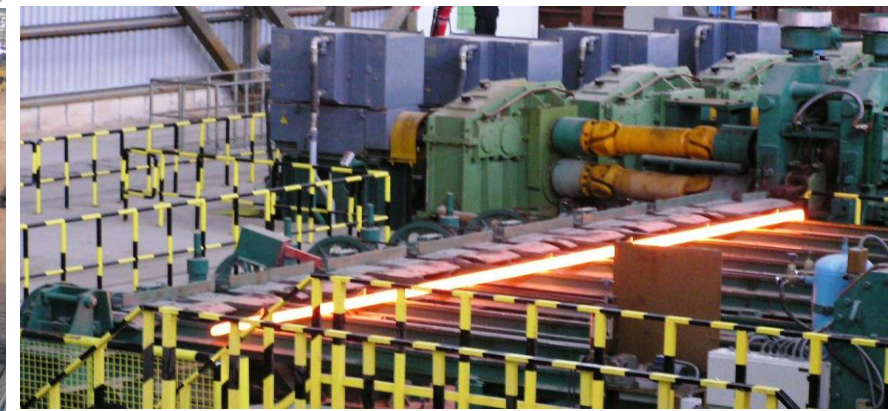
□ 2007 - 2009

- COMPLETE DISMANTLING AND OVERHAULING OF A SECOND HAND BAR AND WIRE ROD MILL COMPLETE WITH BUILDINGS, CABLES, CRANES AND SUPPLIED ON “TURN KEY” BASIS
- FIRST FLEXIBLE ROLLING MILL FOR BAR & WIRE ROD PRODUCTION

HISTORY AND MILESTONES



HISTORY AND MILESTONES



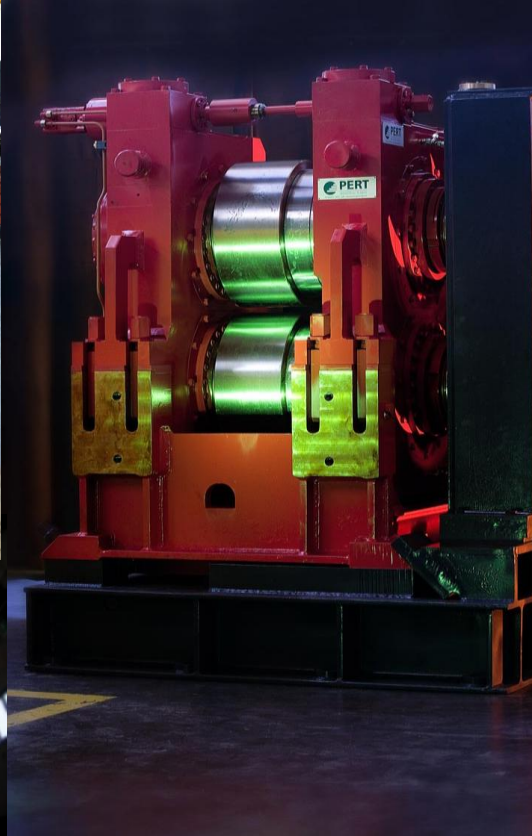
HISTORY AND MILESTONES



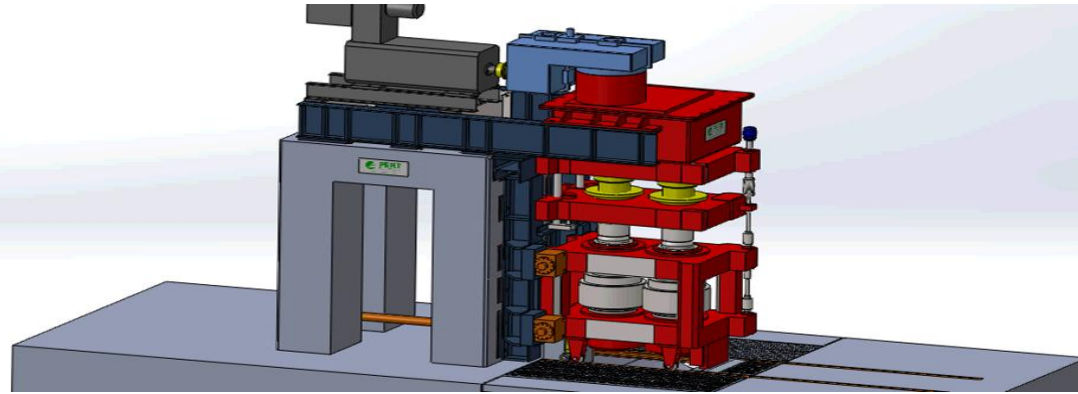
☐ 2010 - 2014

- NEW EQUIPMENT DEVELOPED AND PATENTED AS A RESULT OF THE HEAVY INVESTMENT IN R&D ACTIVITIES
- BAR ROLLING MILLS SUPPLIED WITH THE NEWLY PATENTED **PERT BiSUPPORT** STANDS (1)
- SUPPLY OF FIRST PATENTED **PERT 2xTECHNOLOGY® FINISHING BLOCKS** FOR BAR PRODUCTION (2)
- SUPPLY OF NEWLY PATENTED **PERT FLUR®** SYSTEM IN THE EXISTING FINISHING BLOCKS (3)

PERT BiSUPPORT STANDS (1)



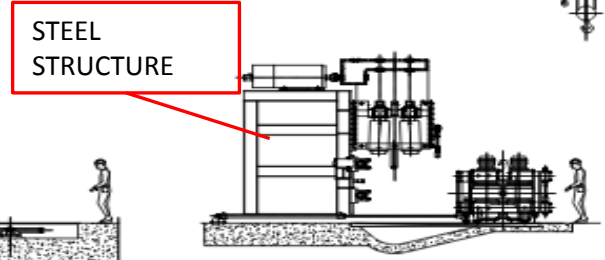
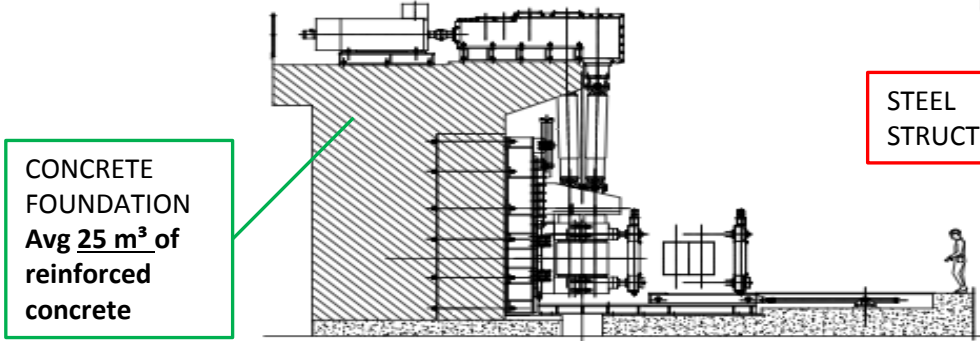
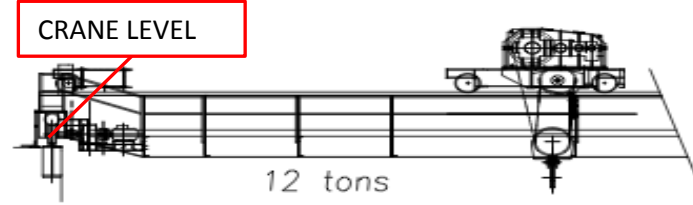
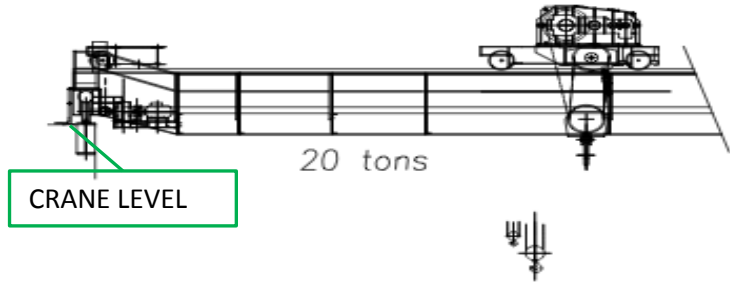
- Spindle-less
- Chock-less
- Minimized on-board piping
- Ring gap regulation with eccentric system (starts from 5 micron)
- Smaller overall dimension
- Higher stiffness
- 85% less spare parts
- New rest bar solutions
- Increased bearings working life (min 50,000 h)
- Possibility to use rings (preferable) or rolls
- Mono and Multi – Groove
- Easy maintenance



PERT BiSUPPORT STANDS (1)

TRADITIONAL VERTICAL ROUGHING STAND 550 DIA

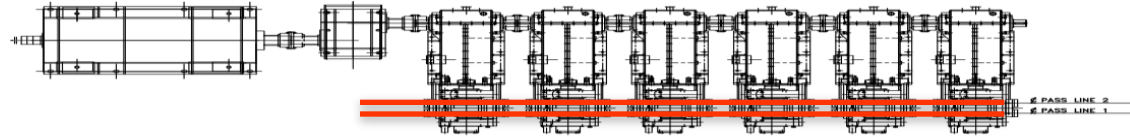
PERT "BS" VERTICAL ROUGHING STAND 550 DIA



PERT 2xTECHNOLOGY® FINISHING BLOCK (2)



- Compact dimension
- Double support
- Simple civil works
- Low skilled workers for maintenance operations
- Eccentric regulation, high gap tolerance
- Use of rings
- Lubrication oil type ISO VG320
- No spindles
- Lower energy consumption if compared to the solution with 2 blocks installed (- 30%)
- Full furnace capacity also for small diameters
- Quick stand change operation in automatic



**FOR BAR PRODUCTION
UP TO 35-m/s**

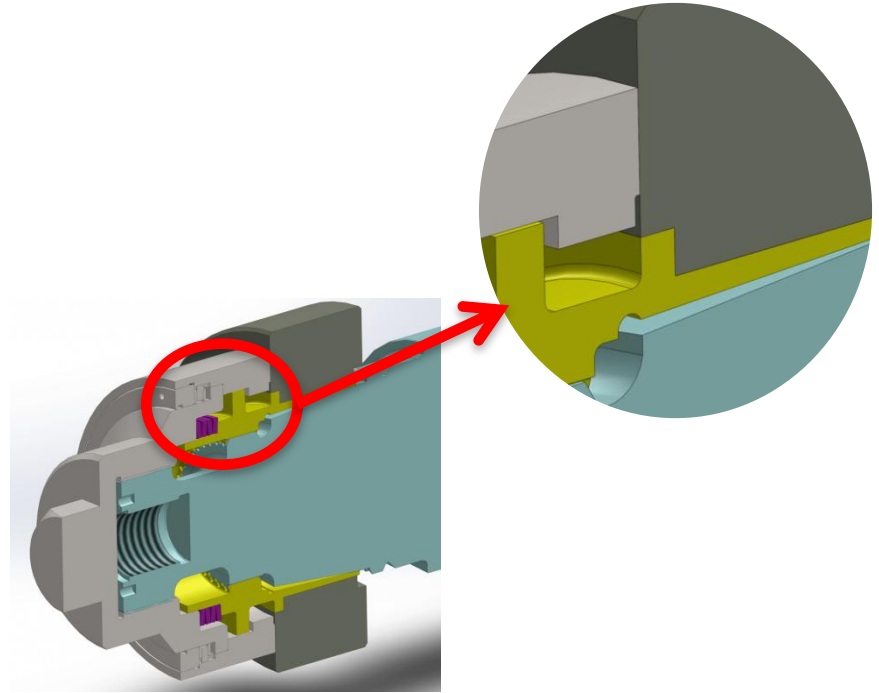
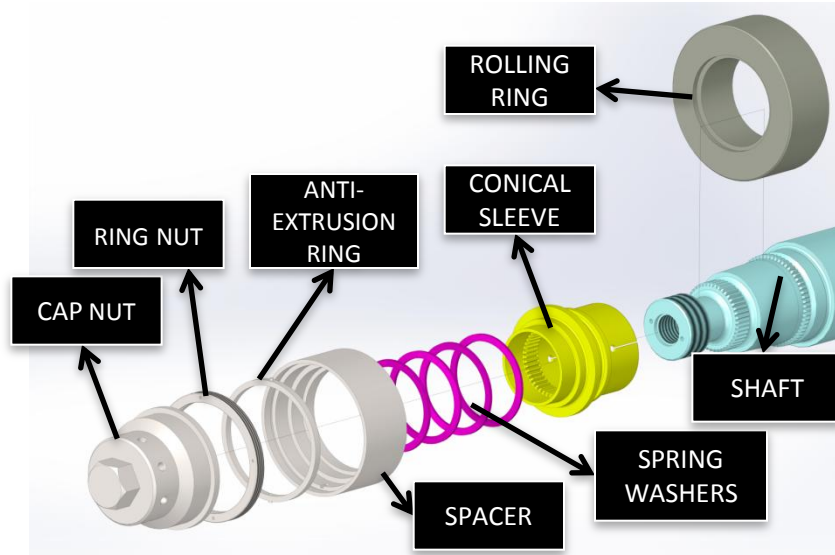


[video](#)

PERT 2xTECHNOLOGY® FINISHING BLOCK (2)



PERT FLUR® SYSTEM – MECHANICAL LOCKING SYSTEM (3)



PERT FLUR® SYSTEM – MECHANICAL LOCKING SYSTEM (3)



HISTORY AND MILESTONES



□ 2010 - 2014

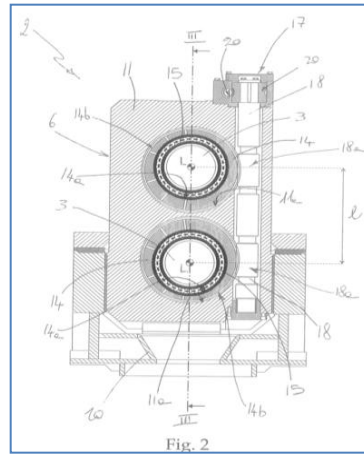
➤ MORE THAN 15 PATENT CERTIFICATES AND TRADE MARKS WORLDWIDE

(1) (1) Veröffentlichungsnummer: EP 2 673 097 A0
(12) Publikationsnummer: EP 2 673 097 A0
(13) Numéro de publication

Internationale Anmeldung veröffentlicht durch die Weltorganisation für geistiges Eigentum unter der Nummer: **WO 2012/107861** (Art. 15(3)(C) EPC).

International application published by the World Intellectual Property Organization under number: **WO 2012/107861** (Art. 15(3)(C) EPC).

Demande internationale publiée par l'Organisation Mondiale de la Propriété Intellectuelle sous le numéro: **WO 2012/107861** (art. 15(3)(C) CBE).



(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)
(13) World Intellectual Property Organization
International Bureau
(43) International Publication Date: 14 August 2012 (16.08.2012)
WIPO / PCT
WO 2013/046178 A1

(51) International Patent Classification: A01J 23/00 (2006.01)
(52) International Application Number: PCT/US2012/031306
(53) International Filing Date: 26 September 2012 (26.09.2012)
(54) Filing Language: English
(55) Publication Language: English
(56) Priority Data: 13/236,188 filed 14 September 2011 (14.09.2011) US
(57) Applicant: PERT, INC. d/b/a PERT HOLDINGS (PT) (US)
(72) Inventor: HAYES, Charles, W. (Charles, W. Hayes)
(73) Applicant: PERT, INC. d/b/a PERT HOLDINGS, Via Patent, Via Veneto, 100, 1-91001, Syracuse (NY) (US)
(54) Title: WIRE-BUILD AND THE LIKE TRAY-BUILDING MACHINE

Fig. 1

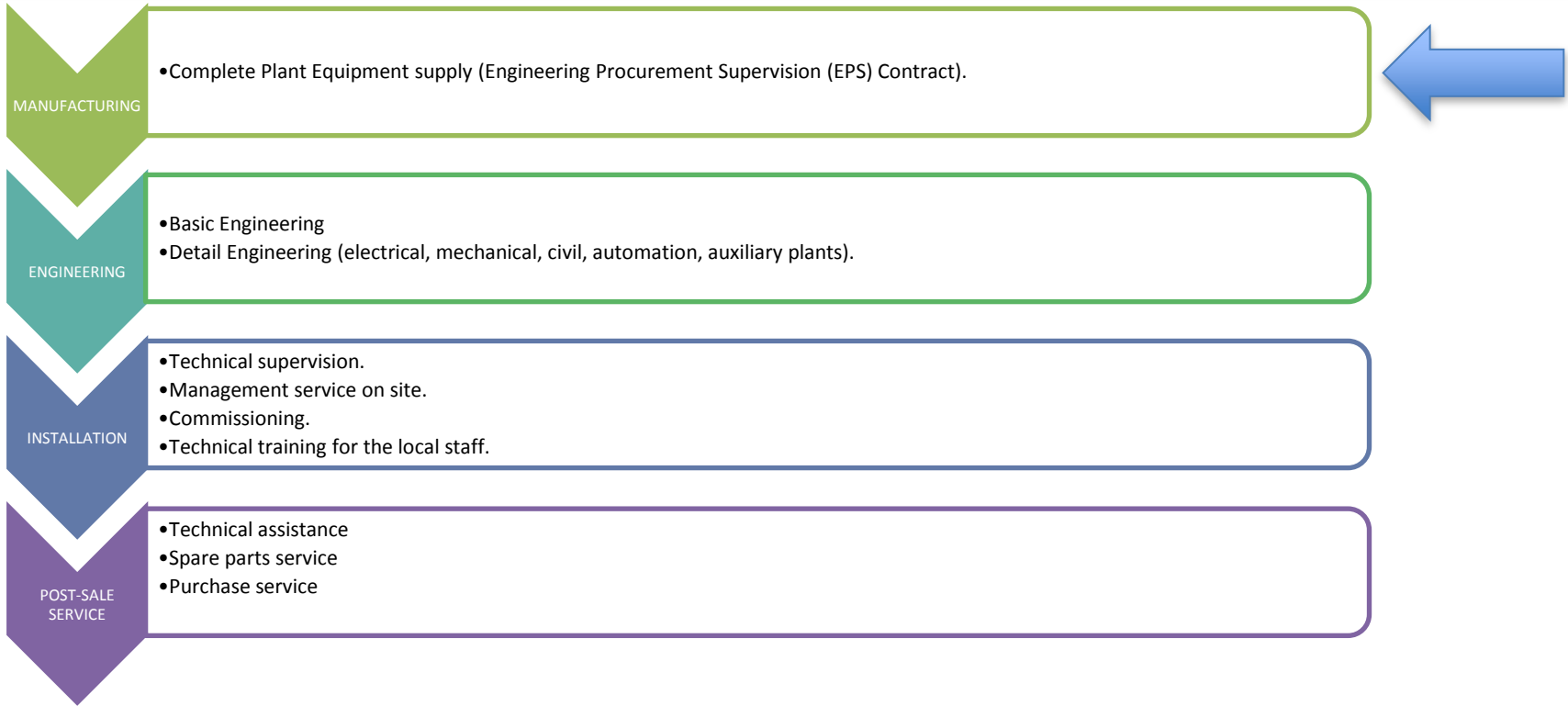
(57) Abstract: Wire-build tray-building machine which comprises a plurality of parallel rollers (2) which are arranged one after the other along the wire and building parts (3), the roller provided along part (2) being provided a plurality of rotating wheels (4) which are arranged along part (3) and are arranged to rotate about an axis (5) perpendicular to the wire and building parts (3), each of the rotating wheels (4) being provided with a plurality of rollers (6) which are arranged along part (3) and are arranged to rotate about an axis (5) perpendicular to the wire and building parts (3), each of the rollers (6) being provided with a plurality of rollers (7) which are arranged along part (3) and are arranged to rotate about an axis (5) perpendicular to the wire and building parts (3).

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Fig. 1

(57) Abstract: A wire-build machine (1) for wire racks and the like which comprises a number of rollers (2) that are arranged one after the other along the wire and building parts (3) and that each roller (2) is provided with a plurality of rollers (4) which are arranged along part (3) and are arranged to rotate about an axis (5) perpendicular to the wire and building parts (3), each of the rollers (4) being provided with a plurality of rollers (6) which are arranged along part (3) and are arranged to rotate about an axis (5) perpendicular to the wire and building parts (3), each of the rollers (6) being provided with a plurality of rollers (7) which are arranged along part (3) and are arranged to rotate about an axis (5) perpendicular to the wire and building parts (3).



PERT EQUIPMENT IS MANUFACTURED

ONLY

IN ITALIAN WORKSHOPS

CAREFUL SELECTION OF LEADING-BRAND COMPONENTS

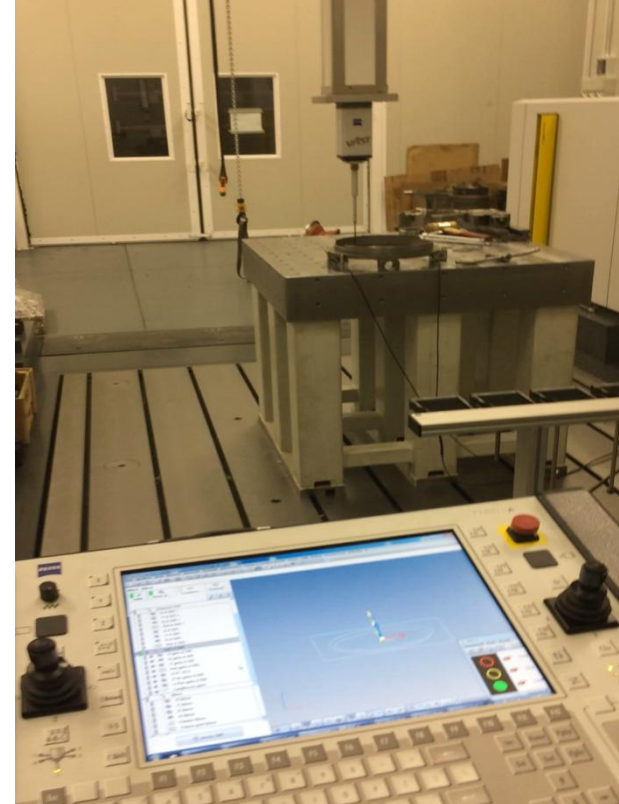
ONLY

FROM HIGH QUALITY SUPPLIERS

PERT supplies to its Customers only equipment of the highest standards of quality...



...this guarantees a fast and successful commissioning of our machines on site.



ROLLING MILLS REFERENCE PROJECTS

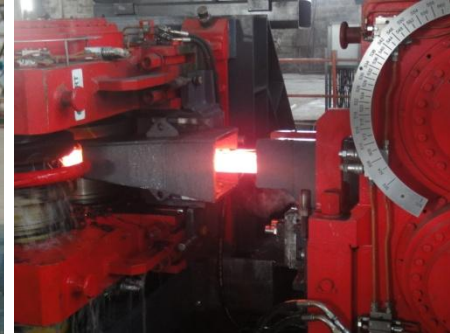
- REVAMPING AND MODERNIZATION PROJECTS

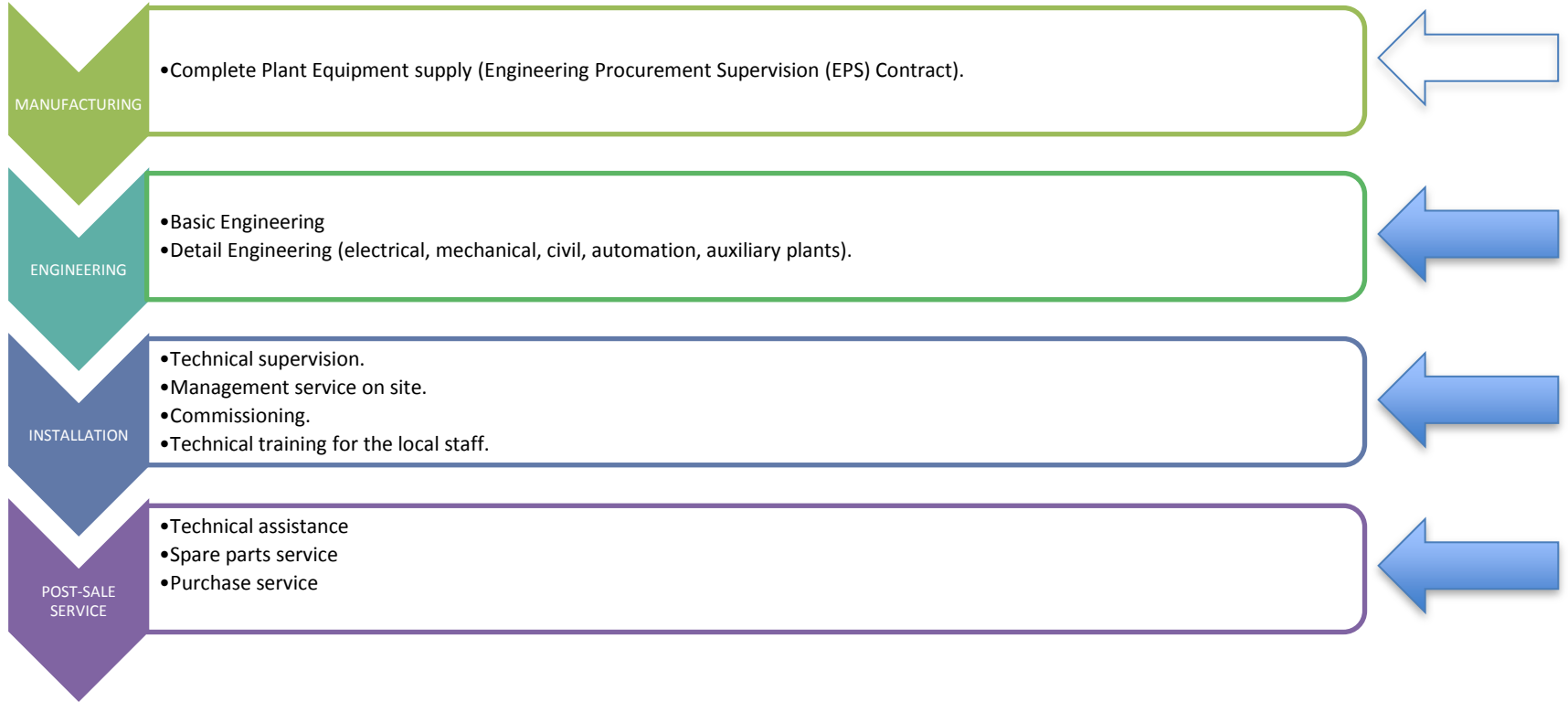
- NEW LINES FOR LONG PRODUCT ROLLING MILLS
 - Bar (smooth and deformed) mill
 - Wire rod mill and / or line
 - Bar in coil line
 - Combined rolling mill
 - Light and medium section mill
 - Special steel mill
 - Grinding balls mill

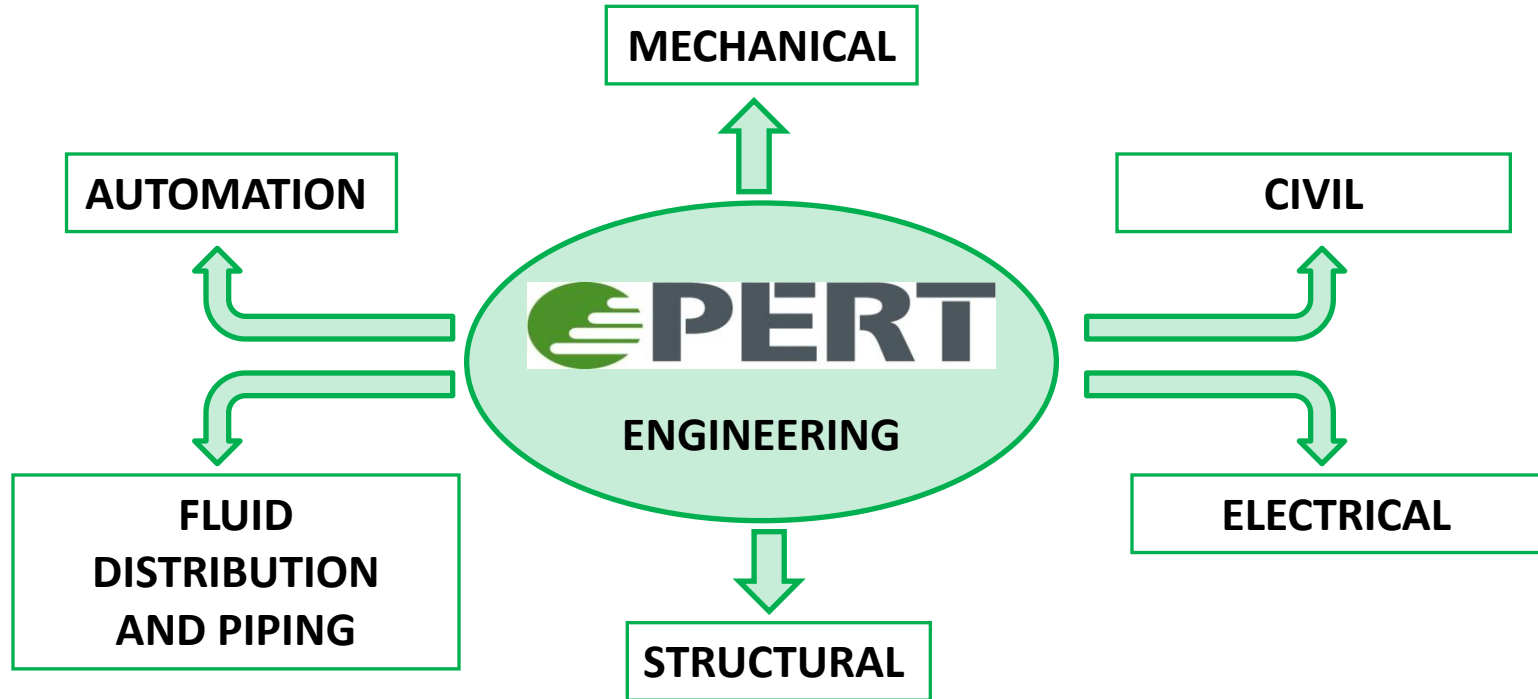
EXISTING PLANTS REVAMPING



NEW PLANT INSTALLATION







PERT CORE BUSINESS - ENGINEERING



PERT CORE BUSINESS - INSTALLATION



PERT CORE BUSINESS – POST-SALE SERVICE



MAJOR TECHNOLOGICAL PARTNERSHIPS

Over the past 20 years


has implemented over 800 projects worldwide in the steel sector, from engineering to the complete equipment supply, cooperating with the most important international companies



MAJOR CUSTOMERS



ROLLING MILL

STEEL MELTS
SHOP
EQUIPMENT

MINI MILL

PERTECO ENVIRONMENTAL TECHNOLOGIES

PERTECO IS A KEY PLAYER IN THE ENVIRONMENTAL FIELD

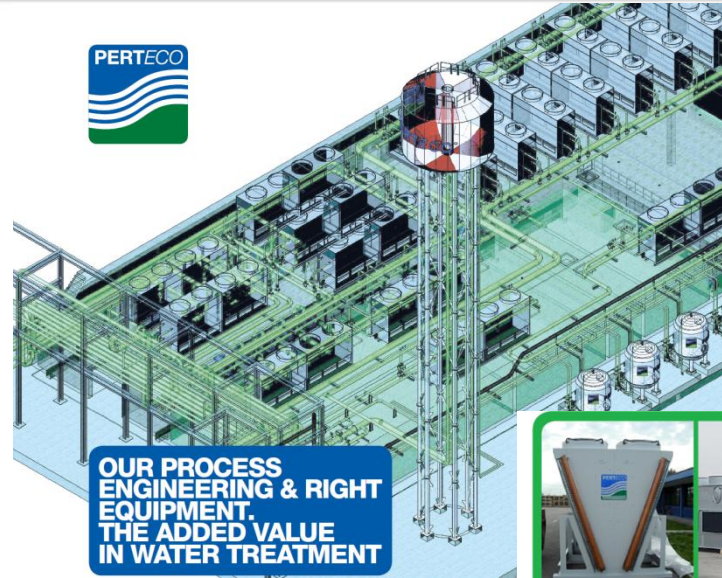
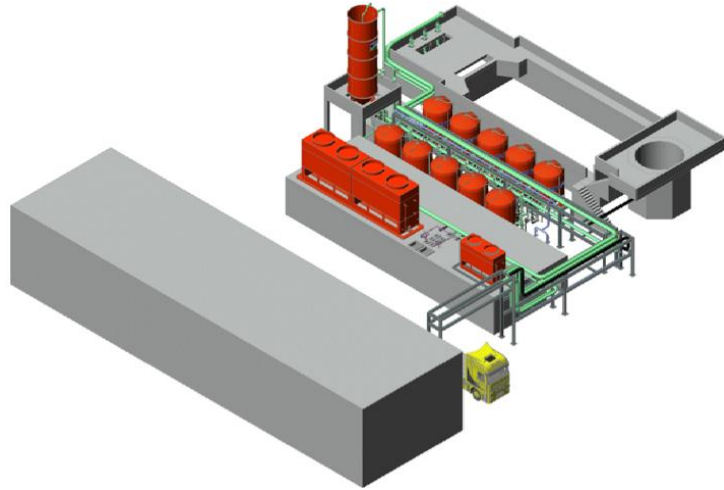


- **WATER TREATMENT PLANTS**
- **FUME TREATMENT PLANTS**
- **SOLID WASTES TREATMENT PLANT**

ACTIVITIES

- ENGINEERING
- PROJECT MANAGEMENT
- Supply of equipment
- Supply of turn-key plants

PERTECO applies the BEST AVAILABLE TECHNOLOGIES (BAT)



**OUR PROCESS
ENGINEERING & RIGHT
EQUIPMENT.
THE ADDED VALUE
IN WATER TREATMENT**

Customized solutions for water saving and management cost reduction for DRI, melt shop and rolling mill plants



Equipment adopted in recent Water Treatment Plant for 1'500'000 tpy Meltshop, in order to reach more than **50% saving** in water consumption. **Great economic benefits come from water chemicals saving.**

THE AIMS OF FTP



**Indoor air quality: dust max
5 mg/Nm³ in the EAF working
platform**



**FTP: General overview of
combustion-cooling-dedusting areas**



**Main emission limits at the
stack (typical values):**

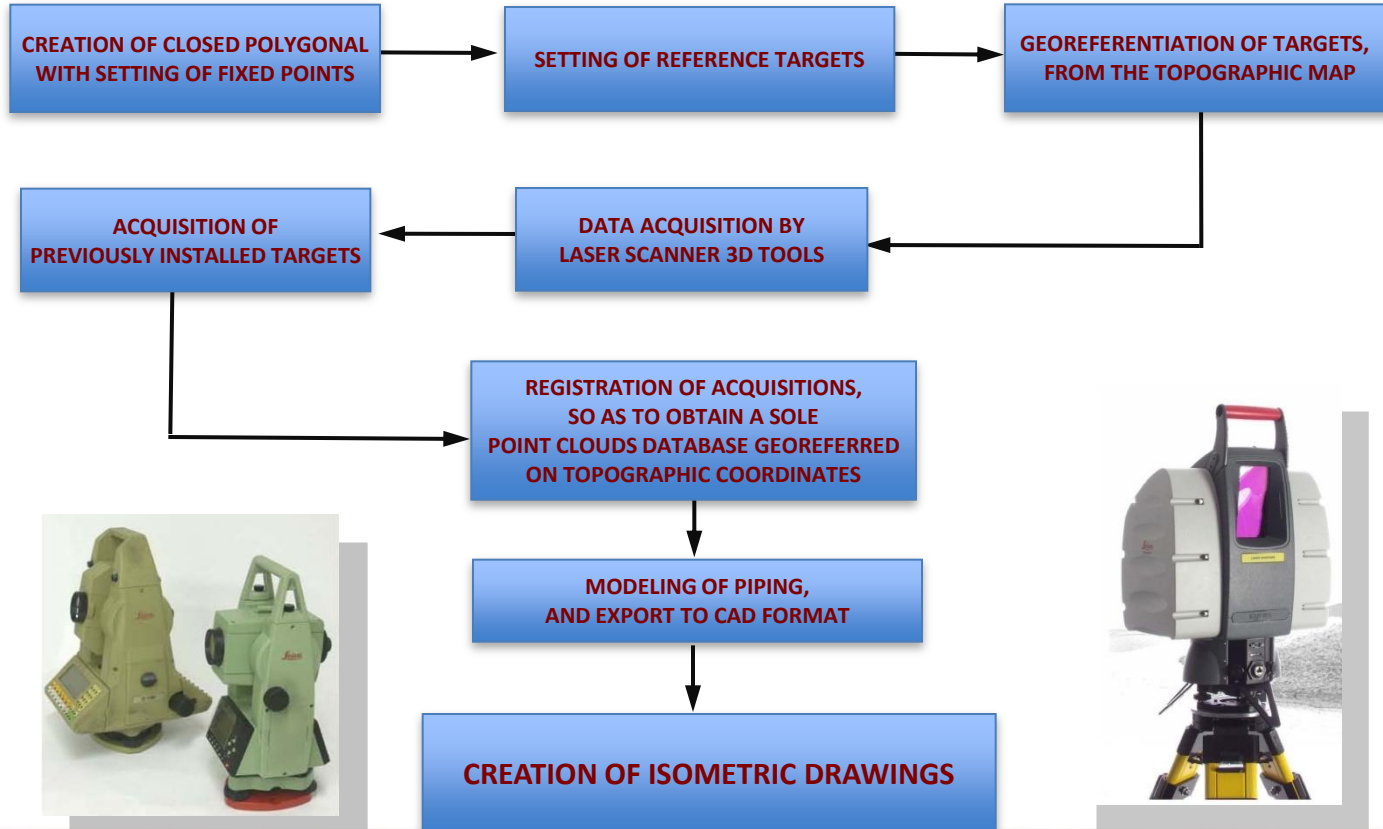
- Dust max 10 mg/Nm³
- 0,1 PCDD/F ng-ITEQ/Nm³
- SO_x, NO_x, metals...

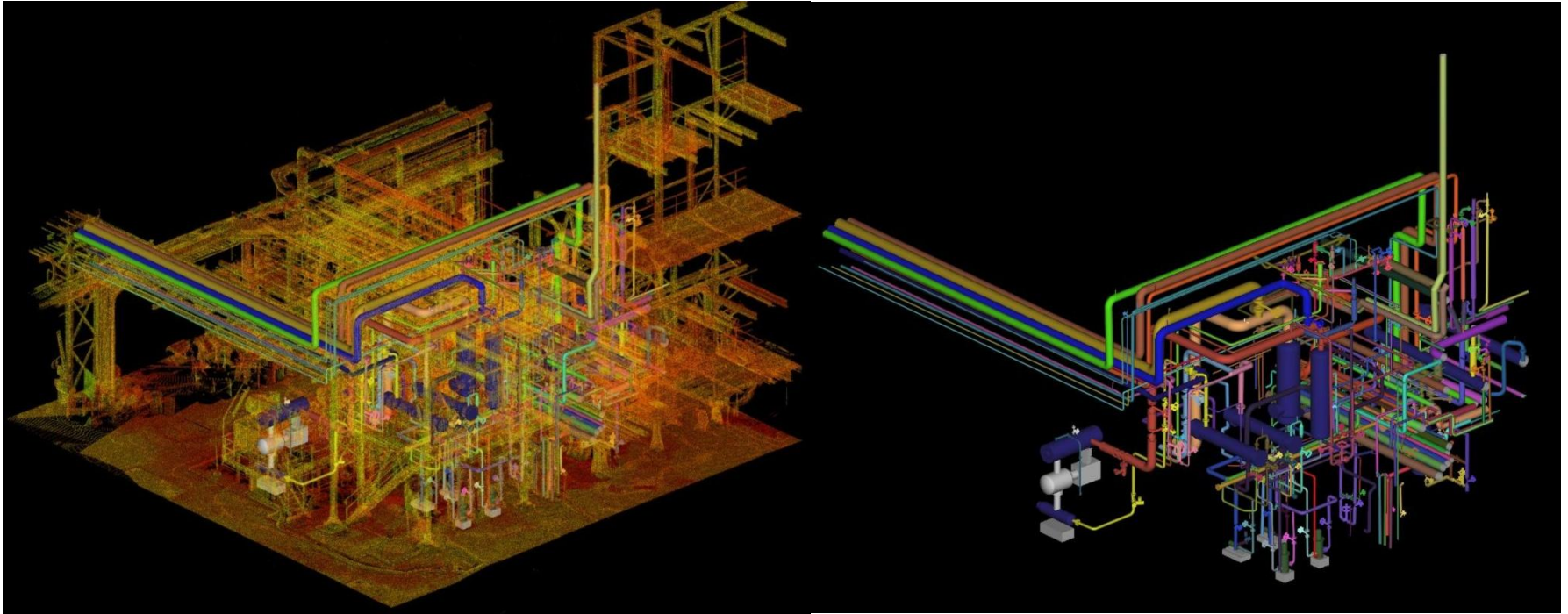
FINAL CONSIDERATIONS

- **CUSTOMIZATION:**
 - The sizing of the WTP and FTP can be highly customized. Although the main parts seem consolidated, there are several factors to be evaluated when assessing the most suitable long-term solutions.
- **COSTS**
 - We have analyzed several factors affecting new plants or revamping design processes. The optimum solution should be economically sustainable and perform efficient WATER TREATMENT or AIR POLLUTANTS ABATEMENT to comply with the environmental regulations.
- **EXPERIENCE**
 - We place great importance on practical experience gained on a global scale, which provides the necessary expertise and insight to address different business needs and technical requirements.
- **COLLABORATION**
 - PERT strongly believes in the great value provided by an ongoing dialogue with the Customers and their involvement since the early stages of the WTP and FTP project design.



GAIA GROUP





POINT CLOUDS WITH SOLID MODEL

SOLID MODEL



TB INVESTMENT



- COMPANY ACTIVITIES
 - Feasibility Studies
 - Business Planning
 - Project Management
 - Logistic Management
 - Trading
 - Export Credit Risk Management



CONCLUSIONS :

- **PERT** CAN SUPPLY THE COMPLETE MILL ON EPS (ENGINEERING PROCUREMENT SUPERVISION) CONTRACT BASIS
- **PERT** CAN SUPPLY THE TECHNOLOGICAL EQUIPMENT AS WELL AS THE DETAIL DRAWING FOR LOCAL MANUFACTURING AND QUALITY CONTROL
- **PERT** CAN SUPPLY THE MAIN TECHNOLOGICAL EQUIPMENT AND THE TECHNICAL SPECIFICATIONS FOR CUSTOMERS PURCHASING DIRECTLY (“SHOPPING AROUND”)

*Thank you for your
kind attention !*



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