

TMT

Tapping - Measuring - Technology



TAPPING TECHNOLOGY

FOR NON-FERROUS AND FERRO-ALLOY APPLICATIONS

TMT - TOGETHER - ONE STEP AHEAD

For more than one hundred years, the names **DANGO & DIENTHAL** and **PAUL WURTH** have been renowned for robust and reliable taphole technology.

The joint venture company **TMT** combines the experience of both, **DDS** and **PW**, to contribute to the creation of taphole technology for the future.

Key objectives are:

- » ongoing product improvement
- » expanded service offering
- » an improved price-performance ratio
- » a broader distribution network
- » taphole management



Combined taphole machine after opening the furnace

With TMT's large product range, the taphole area of existing plants or new furnaces can be best possibly configured by using either standard modular components or customized design solutions.

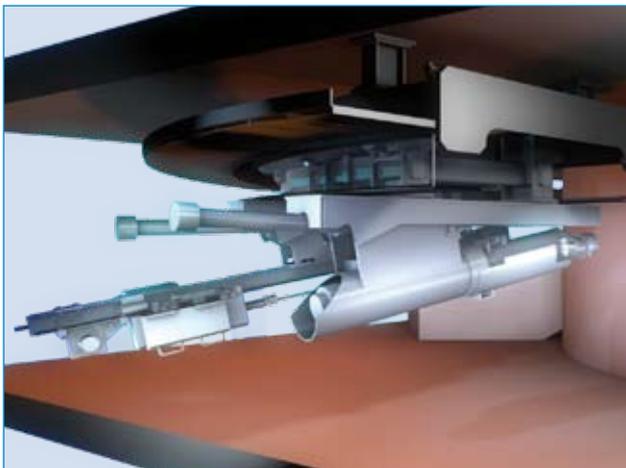
3D movement simulation software is used to optimize tapping area layouts including runners or launders according to our customers' requirements. The pictures show a real installation.

Modern Tapping Area

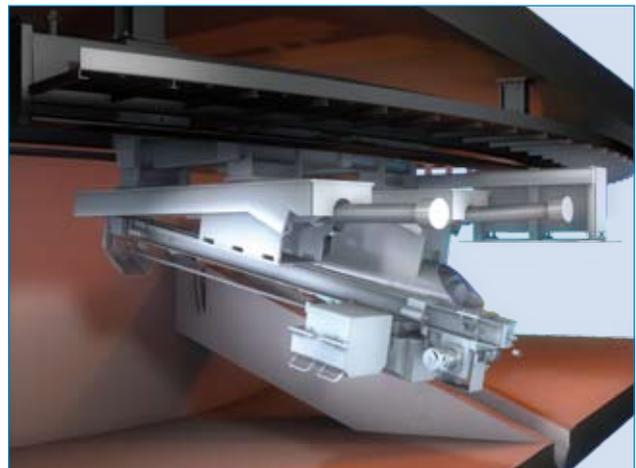
- » Clay Gun
- » Taphole Drill
- » Rodding Device
- » Cleaning Device

SAFETY CONCEPT

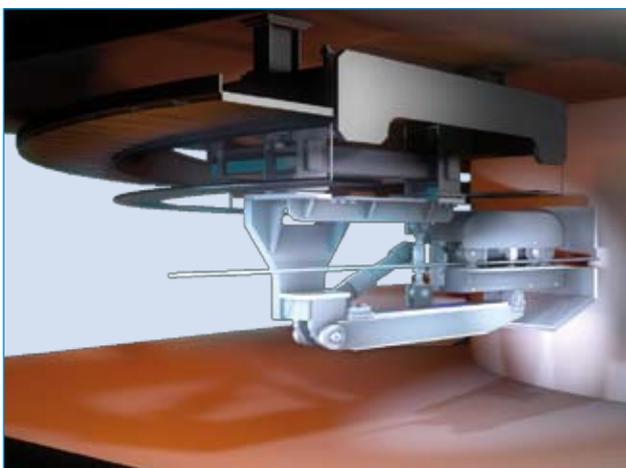
Our combined machines are in compliance with machine standards 2006 42 EG. Complete systems including electric and hydraulic are provided with CE marking. Naturally the machines fully comply with the latest safety standards. According to risk analysis the PLC system is in accordance with EN ISO 13849 Performance Level D.



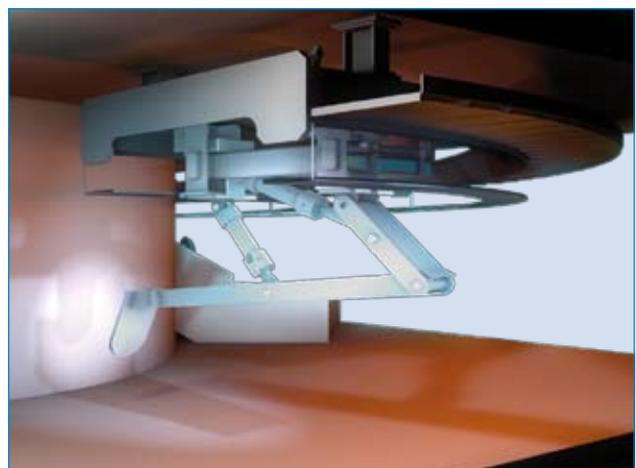
Clay Gun



Taphole Drill



Rodding Device



Cleaning Device

PROJECT PLANNING

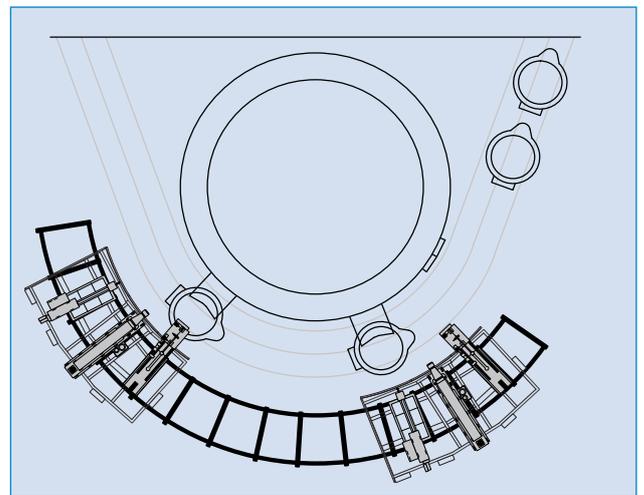
During the project planning phase the tapping platform efficiency is determined for many years of reliable operation. Efficient work processes, space utilization, the actual and future degree of automation, safety concepts and investment costs must be considered to design the ideal customer specific solution.

Decades of experience and several hundred successful layouts designed, position TMT as a solid partner to ensure the overall efficiency of an installation.

The following examples show the variety of potential layouts.

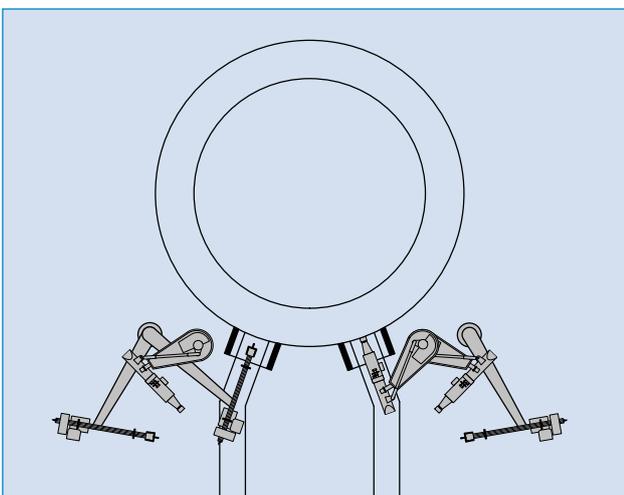
Individual Solution

Machine running on floor rails on the ground floor

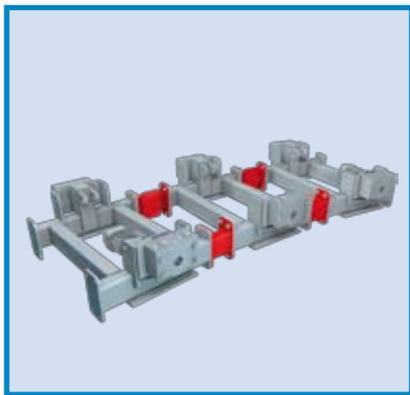


Individual Solution

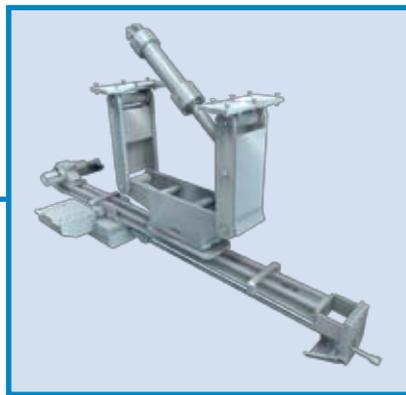
Pedestal mounted machines on the tapping platform



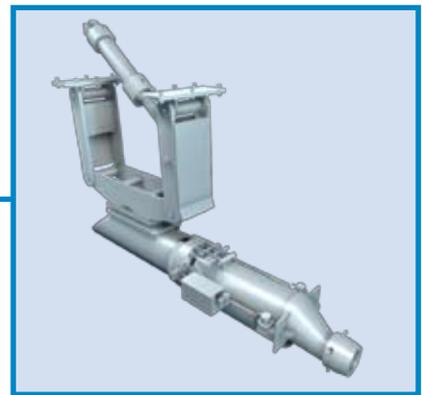
OUR LATEST INNOVATION: THE MODULAR CONSTRUCTION KIT



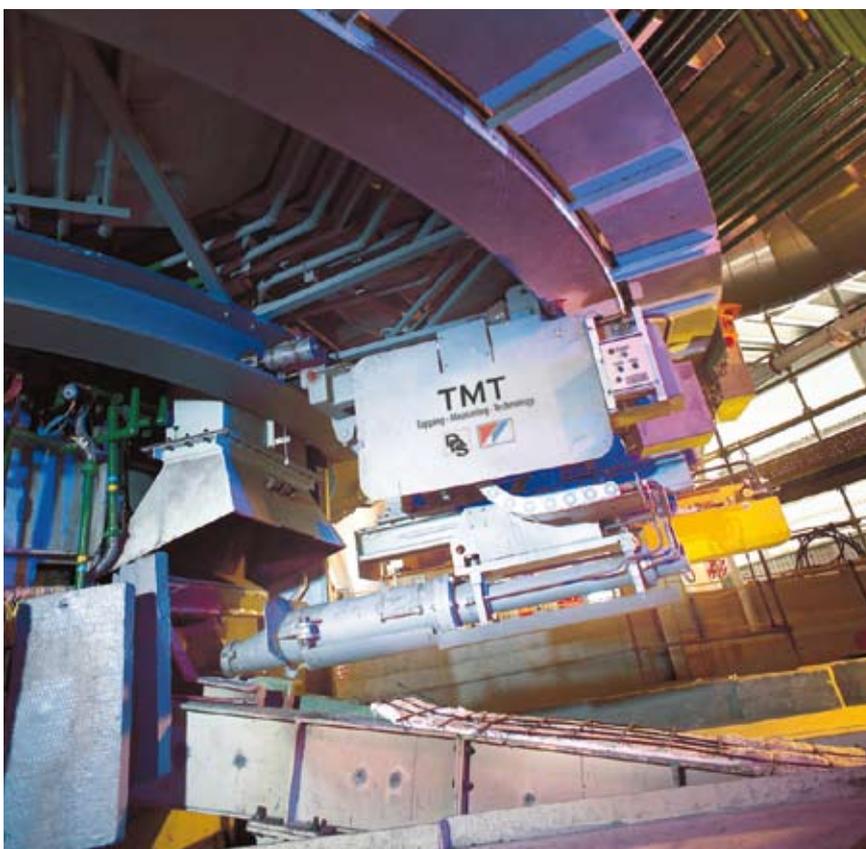
Travel frame for curved or straight rails



Taphole Drill



Clay Gun



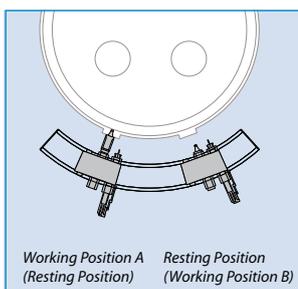
Rail-bound combined clay gun and taphole drill



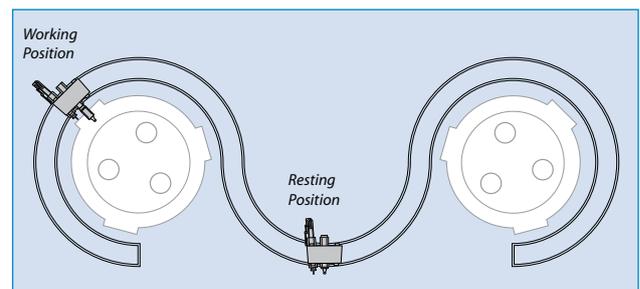
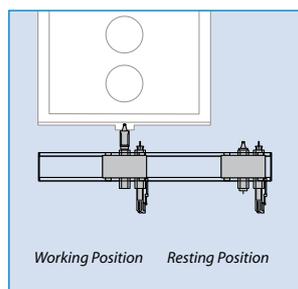
Rodding Device



Cleaning Device



Serving round or rectangular furnaces



or even multiple furnaces

OPTIONAL EQUIPMENT

RODDING DEVICE

A universal tool for carrying:

- » steel rods
- » wooden rods
- » cleaning scrapers
- » oxygen pipes



Rodding Device

SLAG STOPPER

A reliable device

- » solid copper or water cooled



Slag Stopper

TEMPERATURE MEASUREMENT AND SAMPLING

Lances for liquid metal temperature measurement and sampling complete the range of TMT casthouse measuring technology.



Metal Temperature and Sampling Lance

REFERENCES

Several hundred furnaces across the world produce with our machines!

Europe

ALZCHEM
AURUBIS
B.U.S. VALERA
BOLIDEN
COMILOG
ELKEM
ERAMET
FENI
FERROATLANTICA
FINNFJORD
HIDRO NITRO
ICELANDIC ALLOYS
LARCO
MAGNOHROM
METAROM
NORILSK
NORSK JERNVERK
OUTOKUMPU
OFZ
P E M
PRIMOREC
SADACEM
SMS SIEMAG
TINFOS
UNION MINIERE

Africa

ANGLO PLATINUM
ASA METALS
ASSMANG CHROME
AVMIN
FERALLOYS
HIGHVELD STEEL
IMPALA PLATINUM
INTERNAT. FERROMETALS
KONKOLA COPPER MINES
LONMIN
MIDDLEBURGH STEEL
MUFULIRA COPPER MINES
NAMAKWA SANDS
OUTOKUMPU
RICHARDS BAY
ROAN CONSOLIDATED MINES
SAMANCOR
SOUTHERN CROSS STEEL
TICOR
TRANSALLOYS
XSTRATA
ZIMASCO

Asia

BHUSHAN
CHUO ELECTRIC
FANYUAN NON-FERROUS
FERRO ALLOY
FERRO CHROM ORISSA
FERROPHIL
HUILI KUNPENG
JIANGXI COPPER
JILIN JIEN NICKEL
JINCHUAN NONFERROUS
JINDAL
KAZ ZINK
KAZAKHMYS
KAZCHROME
OMAN MINING
POSCO
POSHIMETAL
PT INCO
SABAYEK
SHANDONG HUMON
STERLITE
YUNNAN COPPER
YUNNAN TIN

Latin America

ENAF
ACEPAR
ACESITA
CARAIBA
CBMM
CERRO MATOSO
CODELCO
CODEMIN
ENAMI
FERROVEN
IRONBRAS
MINERA LOMA
SOUTHERN PERU

North America

FALCONBRIDGE
HATCH
IDI
INCO
NORANDA
INMETECO
STILLWATER

Australia / Oceania

BHP BILLITON
HISMELT
KONIAMBO NICKEL
LE NICKEL
NEW ZEALAND STEEL
SIMCOA

This is an extract from our reference list for non-ferrous and ferro-alloy installations. Please contact us for the full list.

BENEFIT FROM MORE THAN 100 YEARS OF EXPERIENCE

TMT

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DANGO & DIENTHAL



PAUL WURTH

TMT's product range for blast furnaces includes:

- **Measuring technology**
 - Above-burden and In-burden Probes
 - Profilemeters
 - Other measuring equipment
- **Tapping technology**
 - Clay Guns
 - Taphole Drills
 - Runner Cover Manipulators
 - Tilting Runners
- **Consumables**
- **Services**

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