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RED HOT PASSION FOR STEEL

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ORI Martin Group

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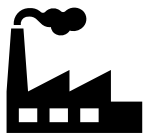
11 Companies 


945 Employees 

in mln €	2017	2018	2019	2020	2021	FC 2022
Revenues	464	574	583	460	591	726
EBITDA	56	84	72	45	39	127
Amortizations	26	25	35	33	55*	46*
Investments	18	73	40	19	27	36**

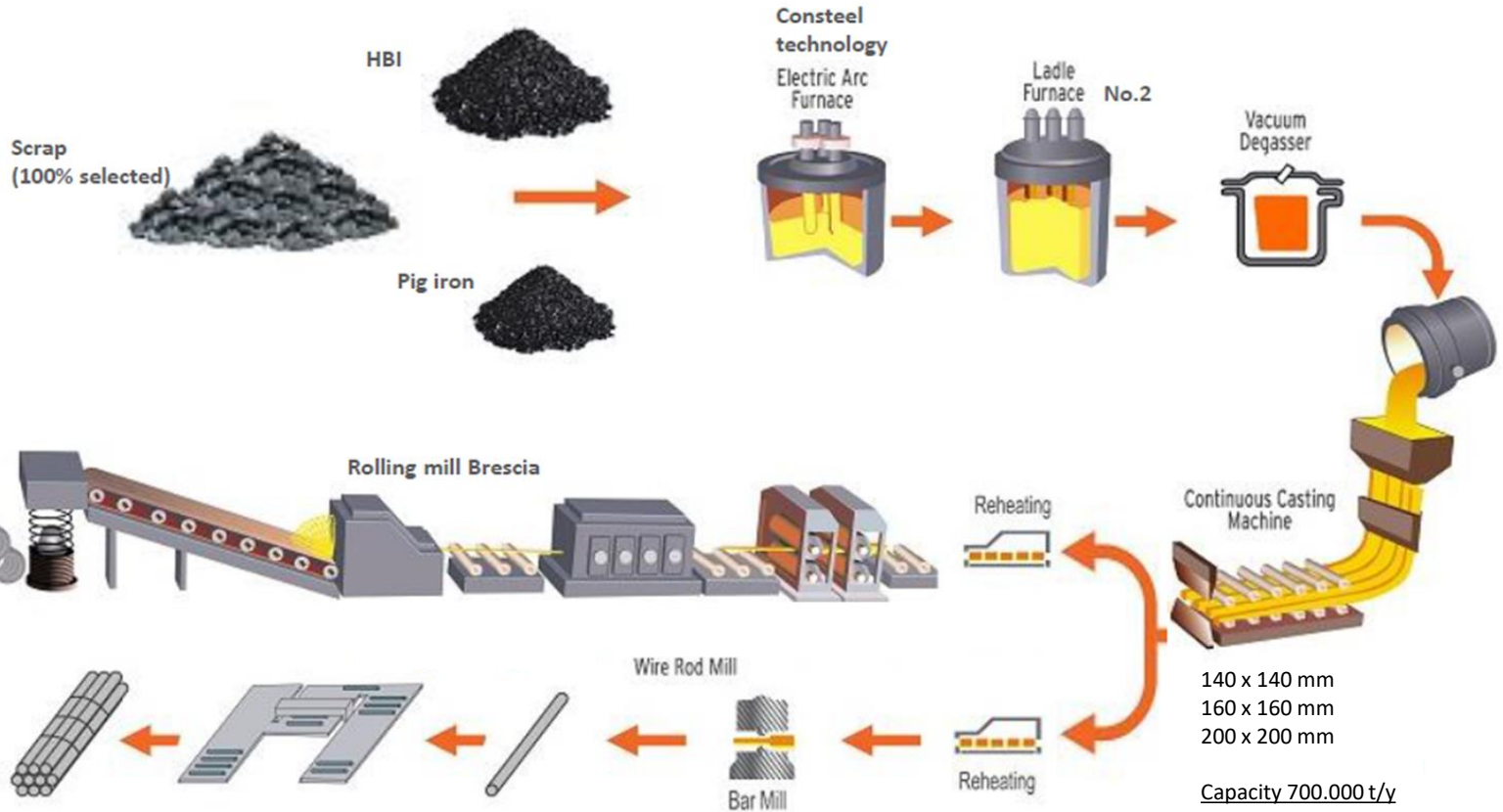
**of which 23 mln € of revaluation in 2021 and 20 mln in 2021*

*** of which 12 mln in Ospitaletto plant*

7  Production Sites

700k  Tons of Melting Shop Capacity

8  Representatives Offices All Over Europe





CONSTEEL TECNOLOGY

ORI MARTIN USES **CONSTEEL** TECHNOLOGY, WHICH ALLOWS THE CONTINUOUS LOADING OF THE SCRAP INTO THE ELECTRIC FURNACE THROUGH A SPECIAL MECHANICAL CONVEYOR THAT ALLOWS THE PREHEATING OF THE SCRAP WITH **GREATER ENERGY EFFICIENCY**.

FURTHERMORE, THIS TECHNOLOGY BRINGS CONSIDERABLE ADVANTAGES RELATED TO THE ENVIRONMENTAL IMPACT: **REDUCTION OF NOISE** AND **BETTER CONTROL** OF THE **RADIOACTIVITY** OF THE **INCOMING SCRAPE**

- REDUCTION OF EAF DUST DISPERSION
- SCRAP PRE-HEATING
- ACOUSTIC IMPACT REDUCTION





IRECOVERY

IRECOVERY

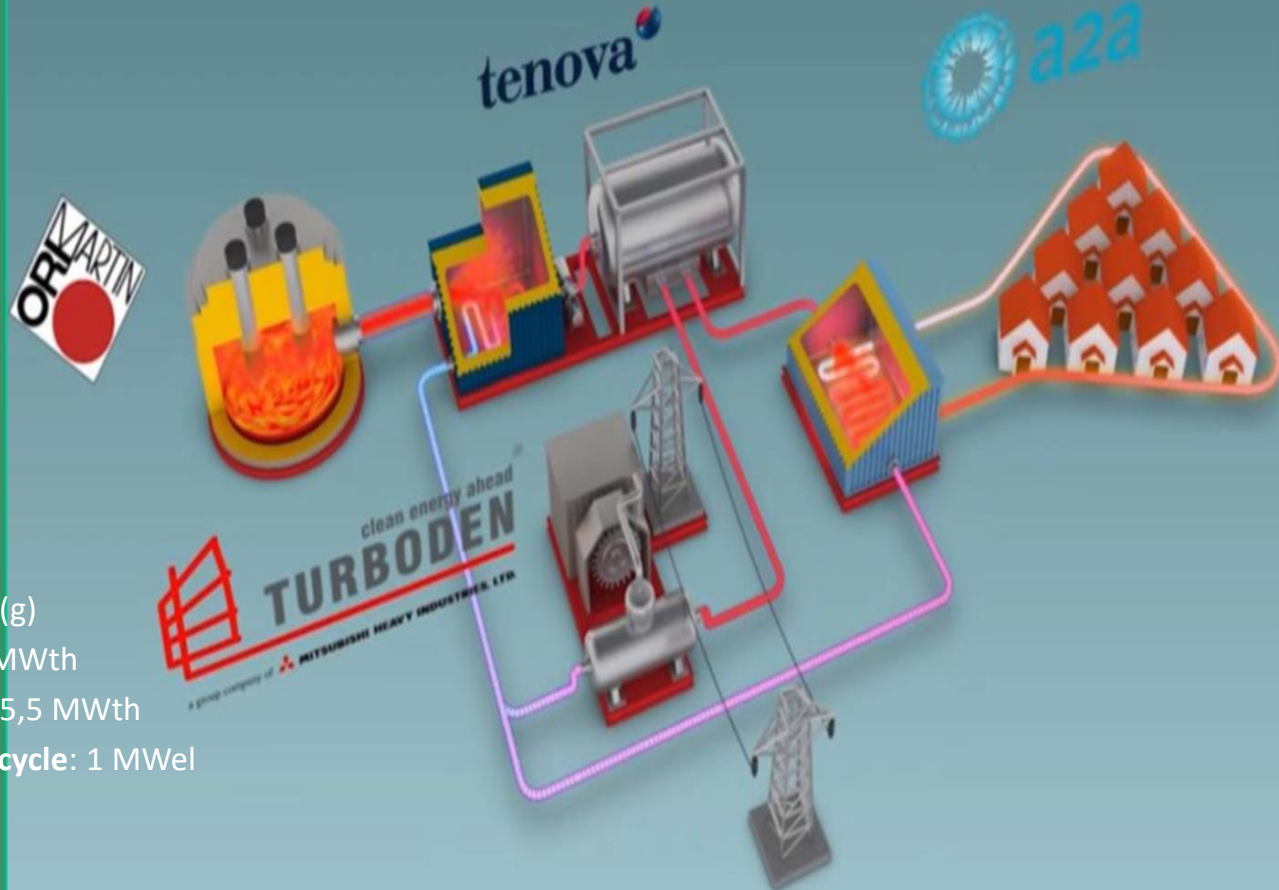




IRECOVERY

- Electricity during summertime (April-October) : ~ 1,8 MW_{el} (nominal)
- District Heating during wintertime (October-April) : ~ 12MW_{th} (nominal)

- Average **steam production**: 11 ton/h
- Average **accumulator pressure**: 24 bar(g)
- Average **thermal power to a2a DH**: 6 MW_{th}
- Average **thermal power to ORC cycle**: 5,5 MW_{th}
- Average **net electric power from ORC cycle**: 1 MW_{el}





IRECOVERY

ANNUAL REDUCTION OF 10'000 T CO₂

52 GWH ANNUAL HEAT RECOVERY CAPACITY

25 MWH DAILY ELECTRIC ENERGY PRODUCTION IN SUMMER (EQUAL TO 700 FAMILIES' ELECTRICAL CONSUMPTION THROUGHOUT THE YEAR)

26 GWH ANNUAL THERMAL PRODUCTION IN WINTER (EQUAL TO 2000 FAMILY CONSUMPTION)

12 MLN€ TOTAL INVESTMENT





HEAT LEAP

GREEN WAY IN STEEL
PRODUCTION SUPPLY CHAIN

LARGE HEAT PUMP

RECOVERY OF
HEAT FROM COOLING WATER
USED FOR THE CONSTEEL® EAF

- 6.5 MLN/€ OF TOTAL COST
- HEAT PUMP OF ~7 MW
- IMPROVING ENERGY EFFICIENCY
- ANNUAL SAVING OF 5.000 TON CO₂



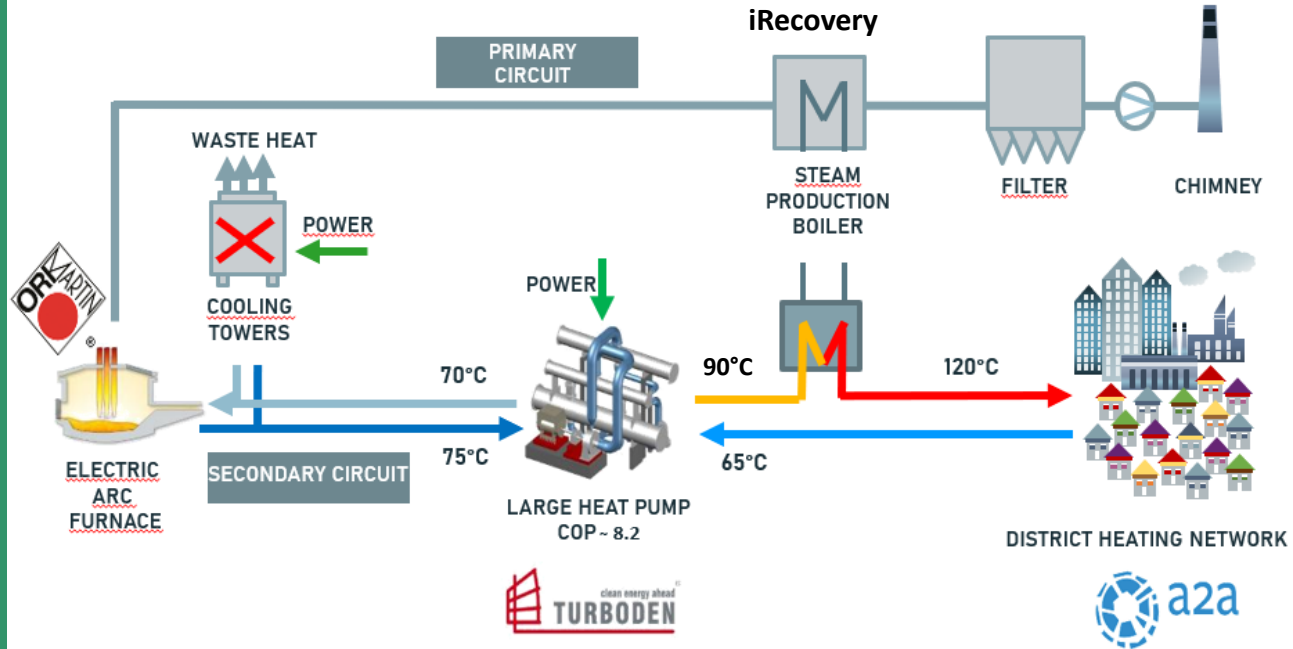


HEATLEAP

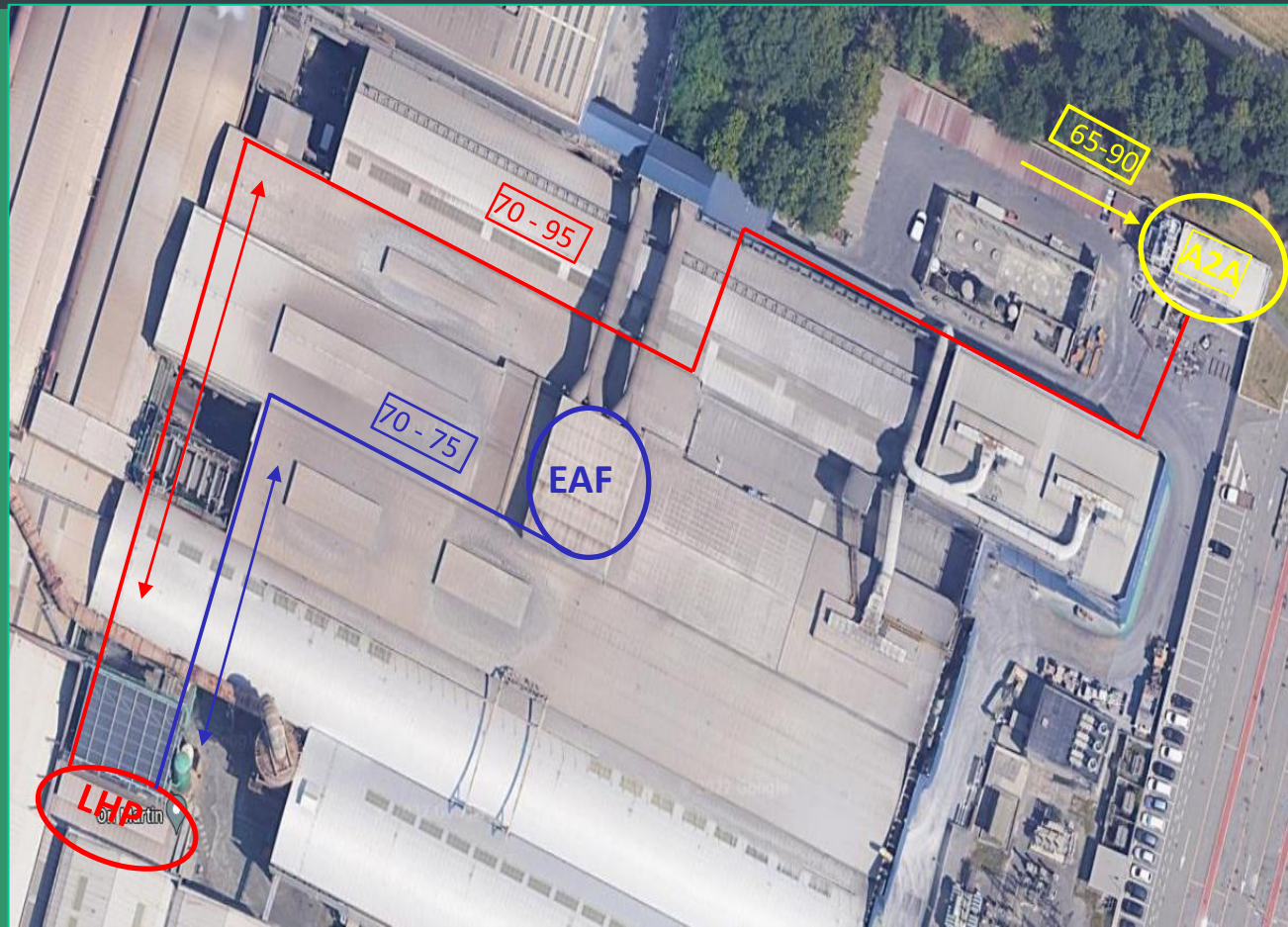
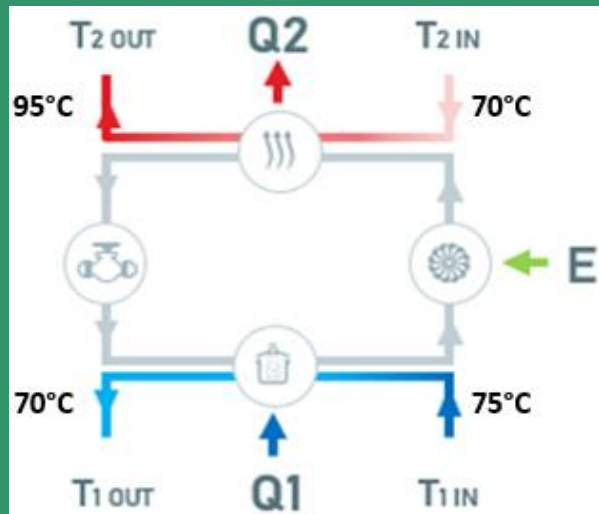
LARGE HEAT PUMP IN ORI MARTIN MELTSHOP

LHP TECHNICAL FEATURES

- 7 MWth design heat delivered
- Full **integration** with DH network. Control system designed to be highly flexible depending on:
 - DH network operating temperature
 - Steam production boiler heat production
- **High flexibility** with 2 compression stages and variable frequency driver (due to a very variable process)
- **Working fluid:** Low GWP HFO, R1233ZD



Intervention area



May 2023



THANK YOU FOR YOUR ATTENTION

Ing. Andrea Panizza

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