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Sales Manager,
MIDA Technology
Danieli Group

SEASI Malaysia 2022

ASEAN Iron&Steel
Sustainability Forum

NOVEMBER, 2022

DANIELI MIDA MINIMILLS, A TRUE SUSTAINABLE GREEN STEEL PRODUCTION. ENERGY SAVING AND LOW CO₂ EMISSION SOLUTIONS.

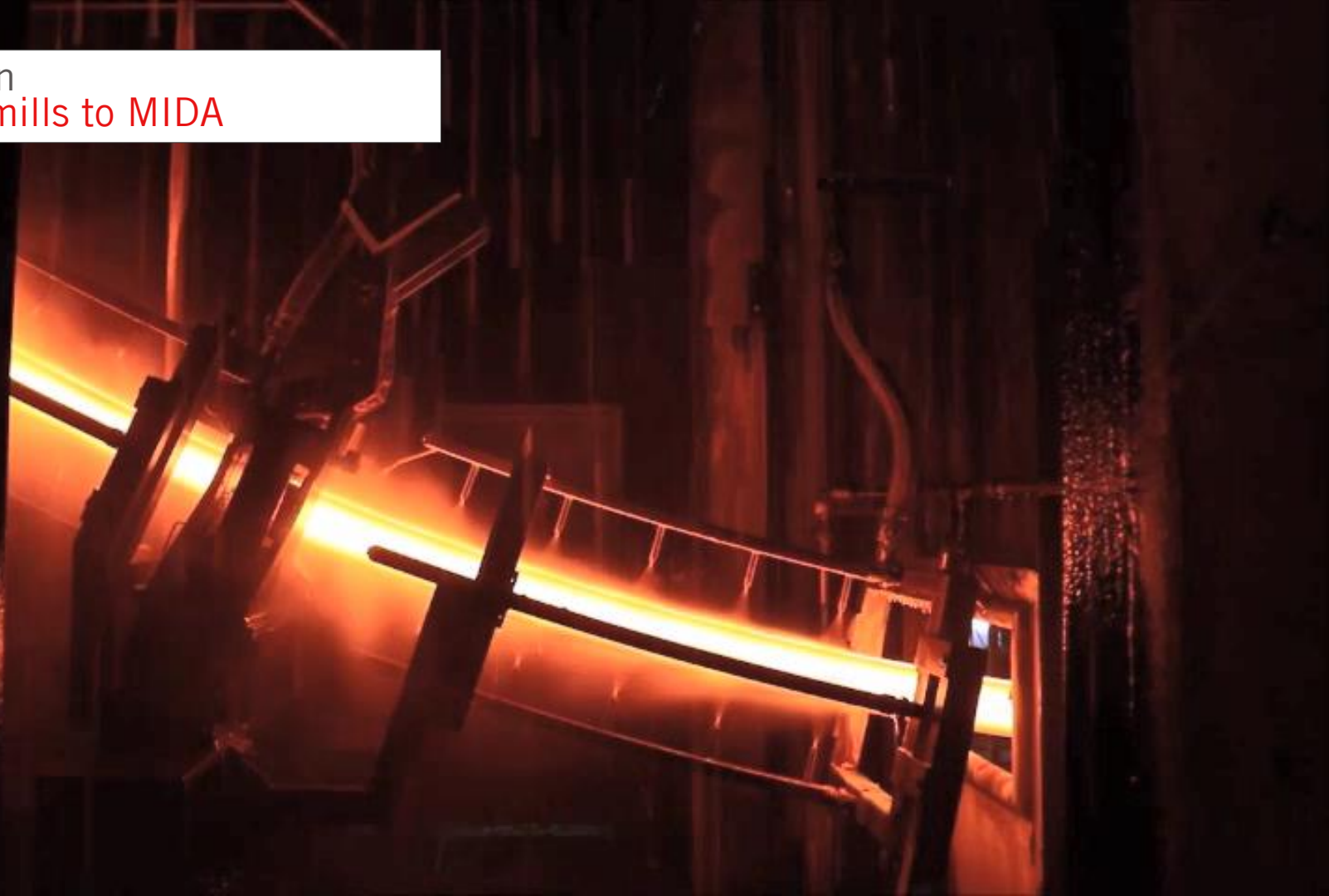
DANIELI / SINCE 1914
PASSION TO INNOVATE
AND PERFORM
IN THE METALS INDUSTRY



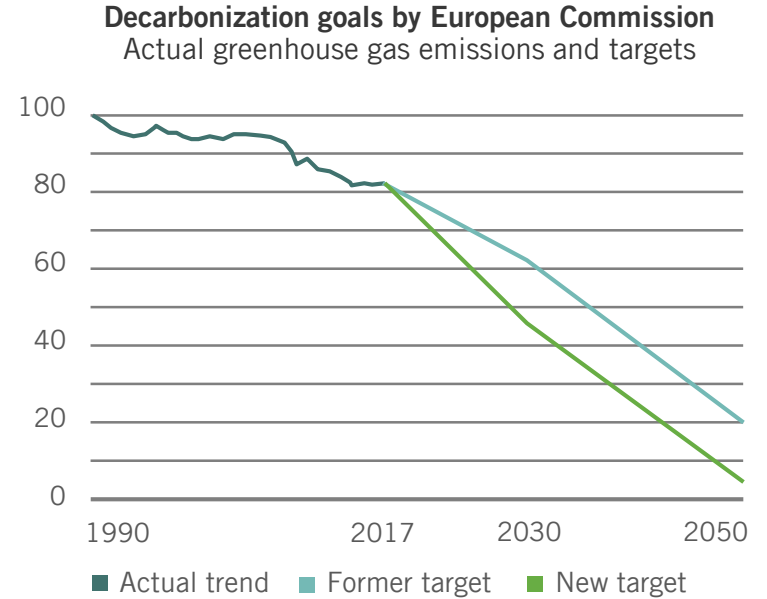
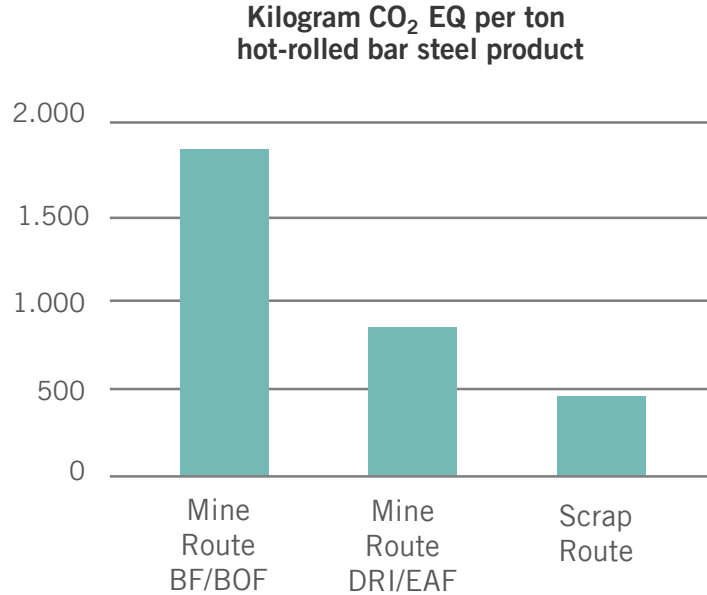
Introduction
from Integrated cycle to Minimills



Introduction
from Minimills to MIDA



CO₂ PROBLEM AND TARGETS



REVOLUTIONARY
DANIELI
MIDA HYBRID
MINIMILL

Unique performances using patented

DIGIMELTER[®], OCTOCASTER[®]
DYSENCASTER[®]
AND DUE[®] TECHNOLOGIES



SCRAP
MANAGEMENT



ENDLESS
SCRAP
CHARGE



DDM –
DANIELI
DIGIMELTER



HYBRID
VIA Q-JENIUS

QSP-D UE®
Danieli Universal
Endless for flat
products



DYSECASTER

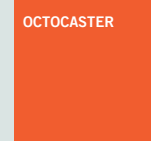


Q-HEAT
FLAT
INDUCTION



QUALITY
HOT-ROLLED
STRIP

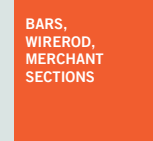
QLP-D UE®
Danieli Universal
Endless for long
products



OCTOCASTER



Q-HEAT
LONG
INDUCTION



BARS,
WIRE ROD,
MERCHANT
SECTIONS



DR + DDM
PRODUCTION
ROUTE



DRI HOT
CHARGE



DRI
PRODUCTION
USING
HYDROGEN





SCRAP
MANAGEMENT



ENDLESS
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CHARGE

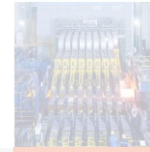


DDM –
DANIELI
DIGIMELTER

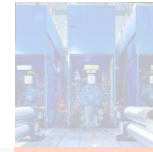
QSP-D UE[®]
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products



DYSECASTER



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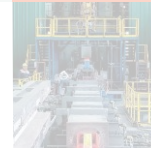
OCTOCASTER

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WIREROD,
MERCHANT
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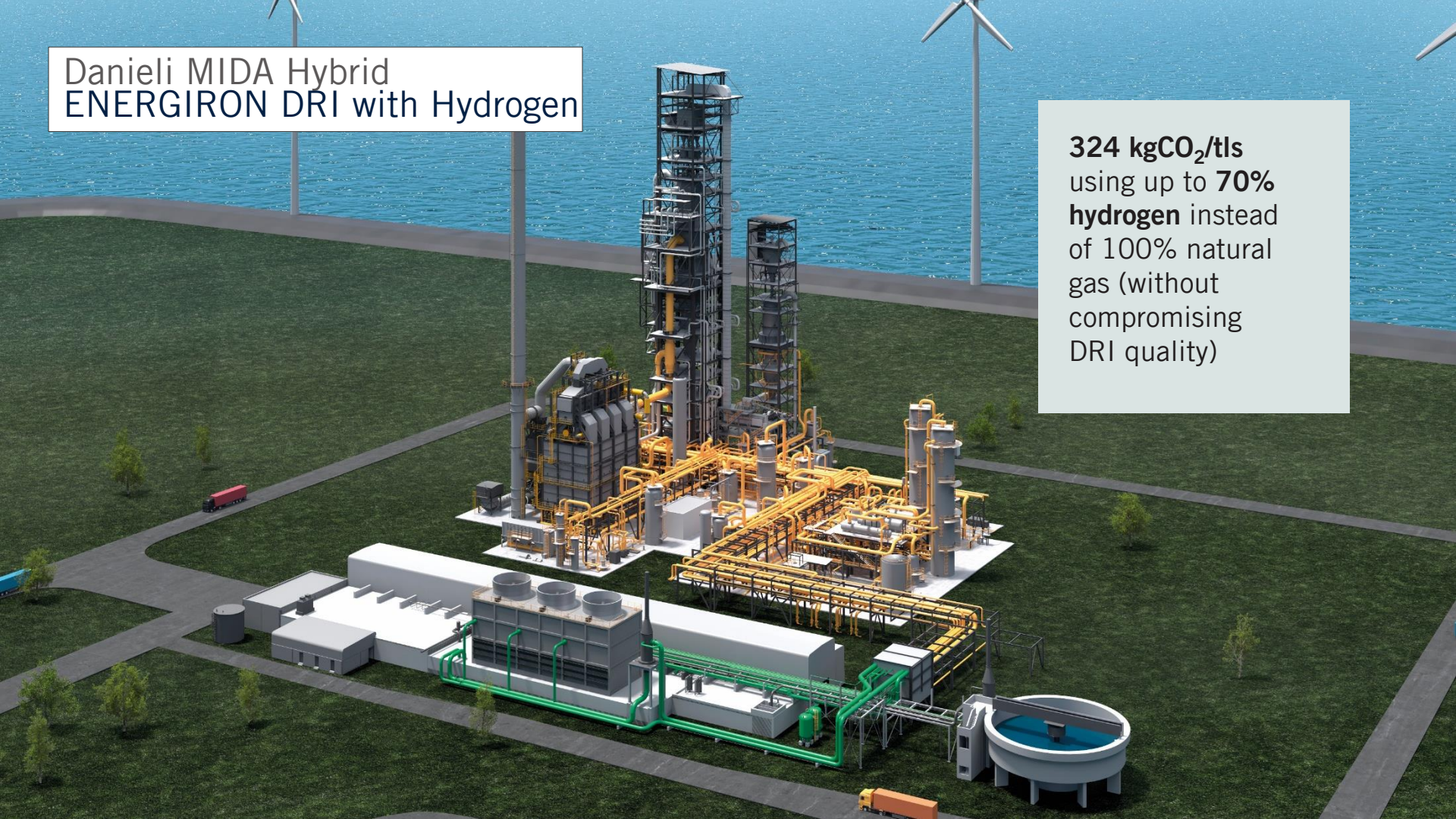


DRI
PRODUCTION
USING
HYDROGEN



Danieli MIDA Hybrid
ENERGIRON DRI with Hydrogen

324 kgCO₂/tIs
using up to **70% hydrogen** instead
of 100% natural
gas (without
compromising
DRI quality)



Danieli MIDA Hybrid DRI

DRI-based minimills featuring the powerful, flexible ENERGIRON technology high-quality steel products due to virgin DRI, with competitive production costs and reduced overall emissions

100 kWh/ton saving

DRI HOT CHARGE





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DYSECASTER



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VIA Q-JENIUS

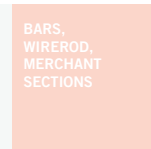
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OCTOCASTER



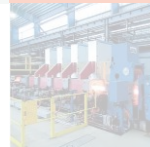
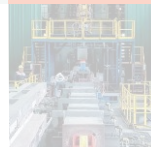
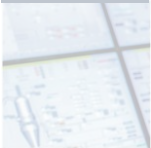
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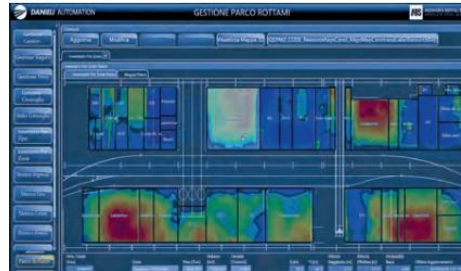


DRI
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USING
HYDROGEN

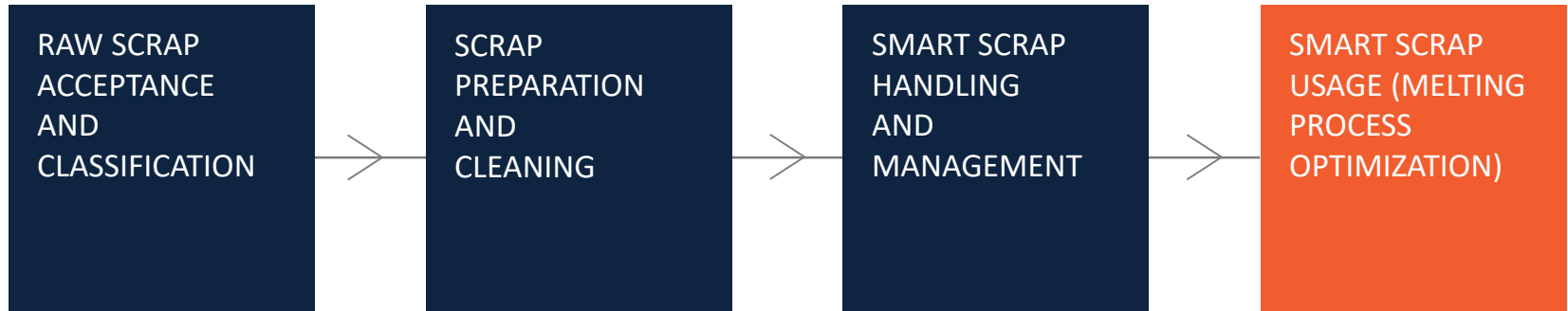


Danieli MIDA Hybrid Scrap process

**DIGITAL SCRAP OPTIMIZATION
AND MANAGEMENT** tracking scrap
from arrival and classification through
each handling step, for high-efficiency
and quality electric steelmaking



Danieli MIDA Hybrid Scrap process



DIGITAL SCRAP OPTIMIZATION AND MANAGEMENT
tracking scrap from arrival and classification through each handling step,
for high-efficiency and quality electric steelmaking



SCRAP
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SCRAP
CHARGE

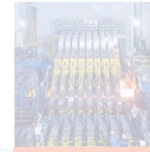


DDM –
DANIELI
DIGIMELTER

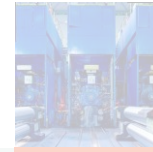
QSP-D UE[®]
Danieli Universal
Endless for flat
products



DYSECASTER



Q-HEAT
FLAT
INDUCTION



QUALITY
HOT-ROLLED
STRIP

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VIA Q-JENIUS

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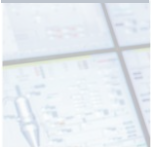
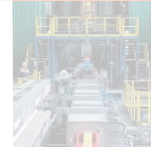
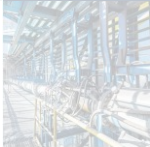
OCTOCASTER

Q-HEAT
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MERCHANT
SECTIONS



DRI
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Danieli MIDA Hybrid Digimelter

DIGIMELTER, the Danieli intelligent melting unit with Hybrid Q-One power and continuous charge technology to be competitive in production costs and sustainability

-25%

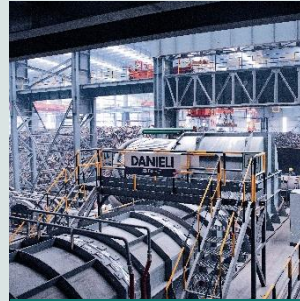
Overall carbon emissions
(CO₂ E)

-5%

Electric energy consumption

-15%

Electrode consumption



**ZEROBUCKET
CONTINUOUS SCRAP
CHARGE**



**HYTEMP®
CONTINUOUS HOT
DRI CHARGE**

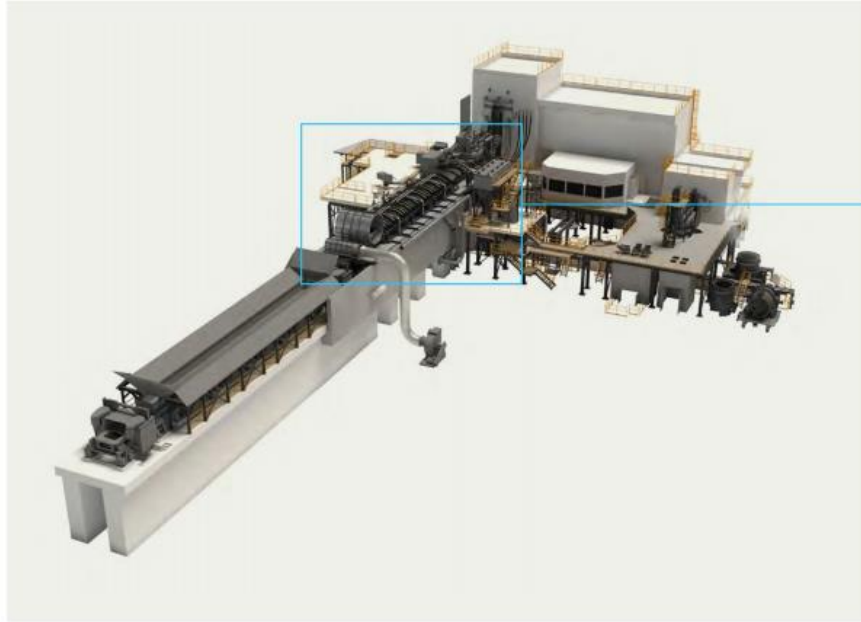


**Q-ONE® DIGITAL
POWER FEEDER**

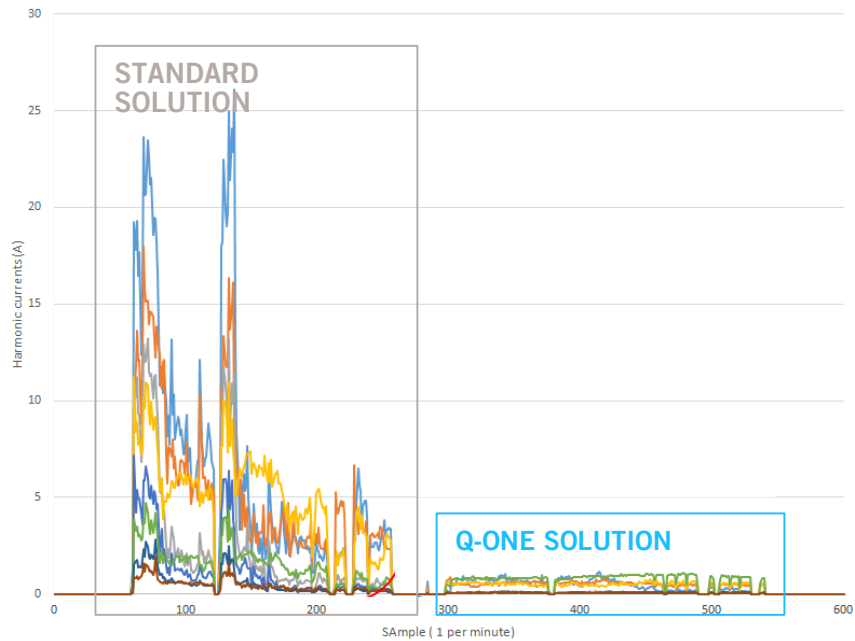


**Q-MELT® AUTOMATIC
FURNACE**

Danieli MIDA Hybrid
ECO-PRO airtight solution



Danieli MIDA Hybrid Q-One

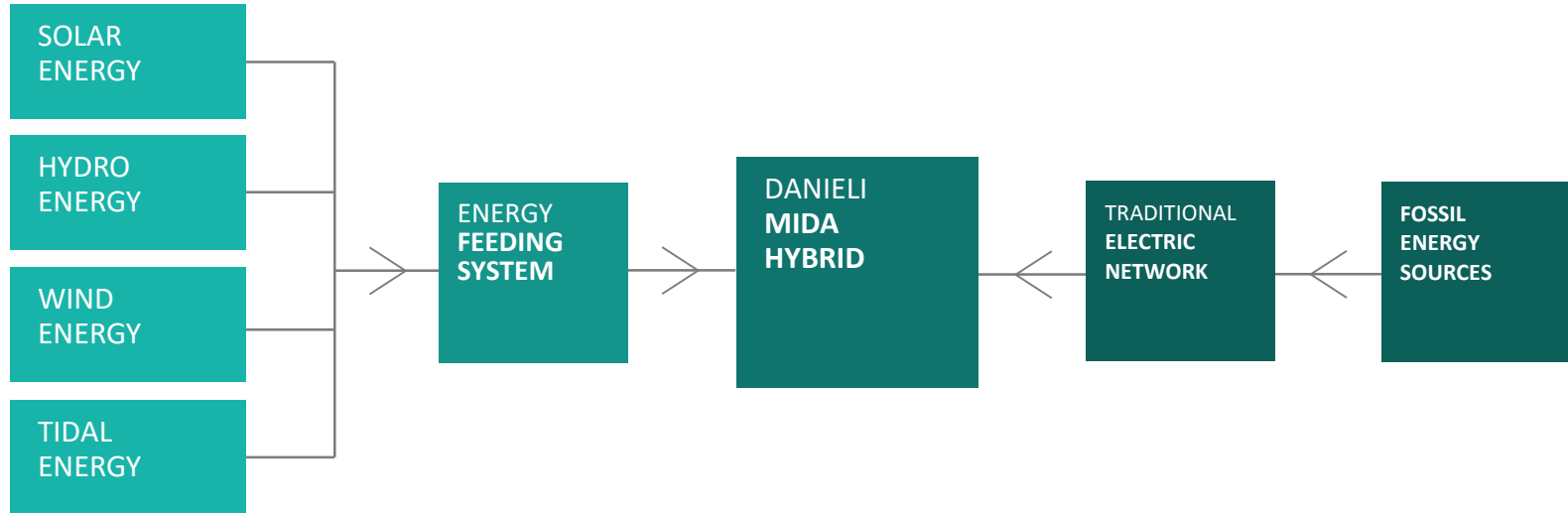




Danieli MIDA Hybrid Q-One

Q-Jenius will allow the electrical feeding of DigiMelter, ladle furnace, Q-Heat induction heaters, rolling mill stand motors and fume-treatment plant fans, directly from the solar field

Danieli MIDA Hybrid The hybrid concept



Danieli adds clean energy to the MIDA DUE® minimill, finding a perfect synergy that enhances competitiveness and production sustainability named MIDA HYBRID



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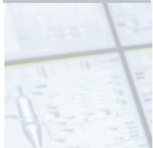
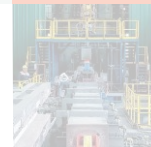
OCTOCASTER

Q-HEAT
LONG
INDUCTION

BARS,
WIREROD,
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DRI
PRODUCTION
USING
HYDROGEN



DANIELI QSP-DUE® UNIVERSAL ENDLESS FOR FLAT PRODUCTS



**DYSENCASTER®
UP TO 6.5 M/MIN
CASTING SPEED**



**Q-HEAT FLAT
INDUCTION-
TEMPERATURE
CONTROL**



**WIDE RANGE
OF QUALITY
HOT-ROLLED
STRIP**

Danieli MIDA Hybrid QSP Configurations

Quality Strip Product for the **most flexible and competitive** hot-strip production

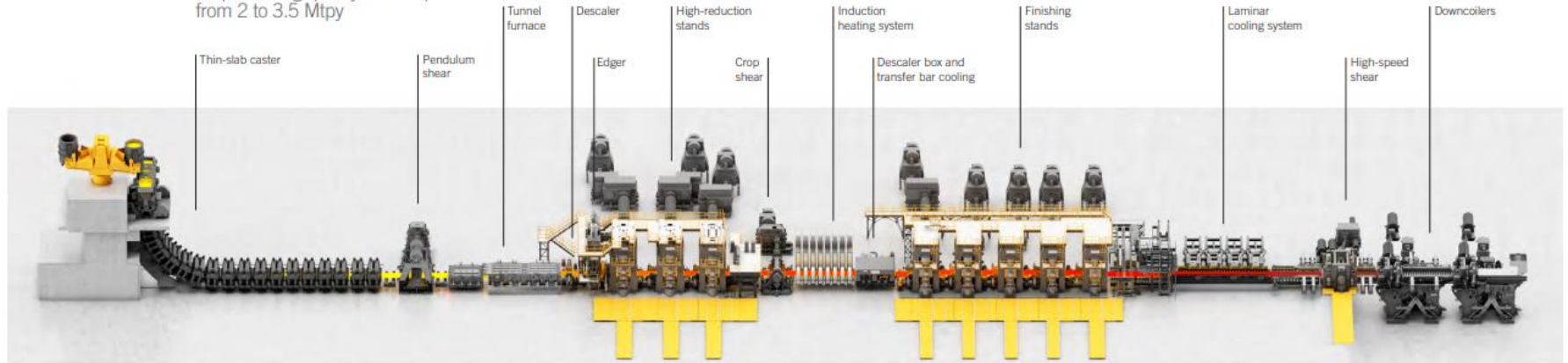
> Compact

> 2R+4F

> 2R+6F

> DUE[®]
/ 3R+5F

QSP-DUE[®] Typical layout
for producing quality thin-strip
from 2 to 3.5 Mtpy





DANIELI
DRY DISTORTION



SCRAP
MANAGEMENT



ENDLESS
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DDM –
DANIELI
DIGIMELTER

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DYSECASTER



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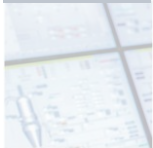
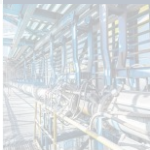
OCTOCASTER

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LONG
INDUCTION

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WIREROD,
MERCHANT
SECTIONS



DRI
PRODUCTION
USING
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DANIELI QSP-DUE® UNIVERSAL ENDLESS FOR LONG PRODUCTS



**OCTOCASTER®
UP TO 10 M/MIN
CASTING SPEED**



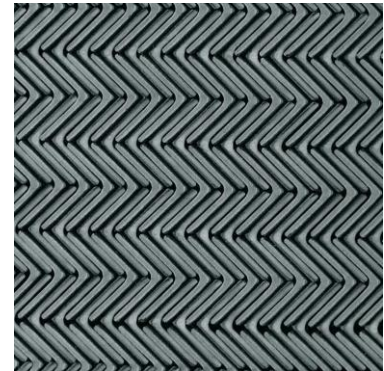
**Q-HEAT LONG
INDUCTION-
TEMPERATURE
CONTROL**



**BARS,
WIREROD,
MERCHANT
SECTIONS**

Danieli MIDA Hybrid
QLP products

QLP-DUE® Quality Long Products
Danieli Universal Endless **just one**
powerful casting strand for the most
flexible and competitive production
of bars, wirerod and light sections





鑫桂钢
XINGUIGANG

GUILIN - CHINA



Danieli MIDA Hybrid
Conclusions



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