# Acerinox
# Capital Markets Day

Germany – November 29 & 30, 2023

# Acerinox CMD 2023

## Locations

## November 29

**Presentations at Rheinterrasse**

Düsseldorf

## November 30

**Visit our high-performance alloys (HPA) plant**

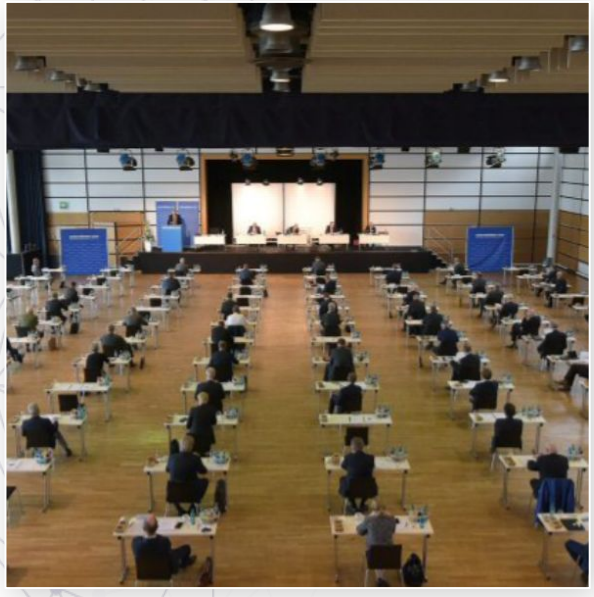
Unna

# Acerinox CMD 2023

## November 29

# Presentations at Rheinterrasse

Joseph-Beuys-Ufer 33 · 40479 Düsseldorf



### November 29: Agenda

**12:30 pm**
Welcome and lunch at Rheinterrasse

**1:45 pm**
Opening remarks and presentations (until 6:00 pm)

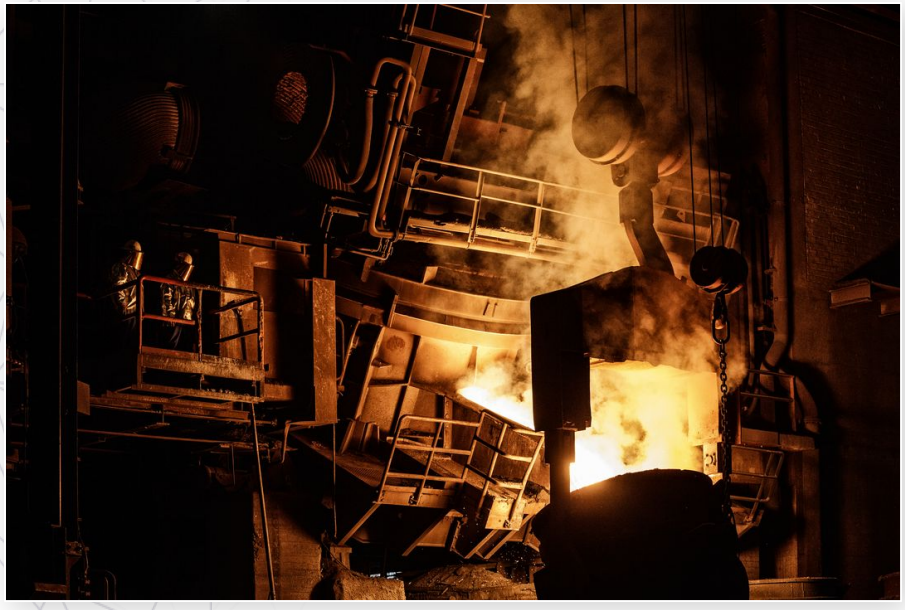
**8:10 pm**
Dinner at Füchschen

# Acerinox CMD 2023

## November 30

# Visit
# our HPA plant

Unna



### November 30: Agenda

**8:00 am**
Departure from hotel

**10:00 am**
Welcome reception in Unna and plant tour

**2:30 pm**
Departure to airport (DUS)

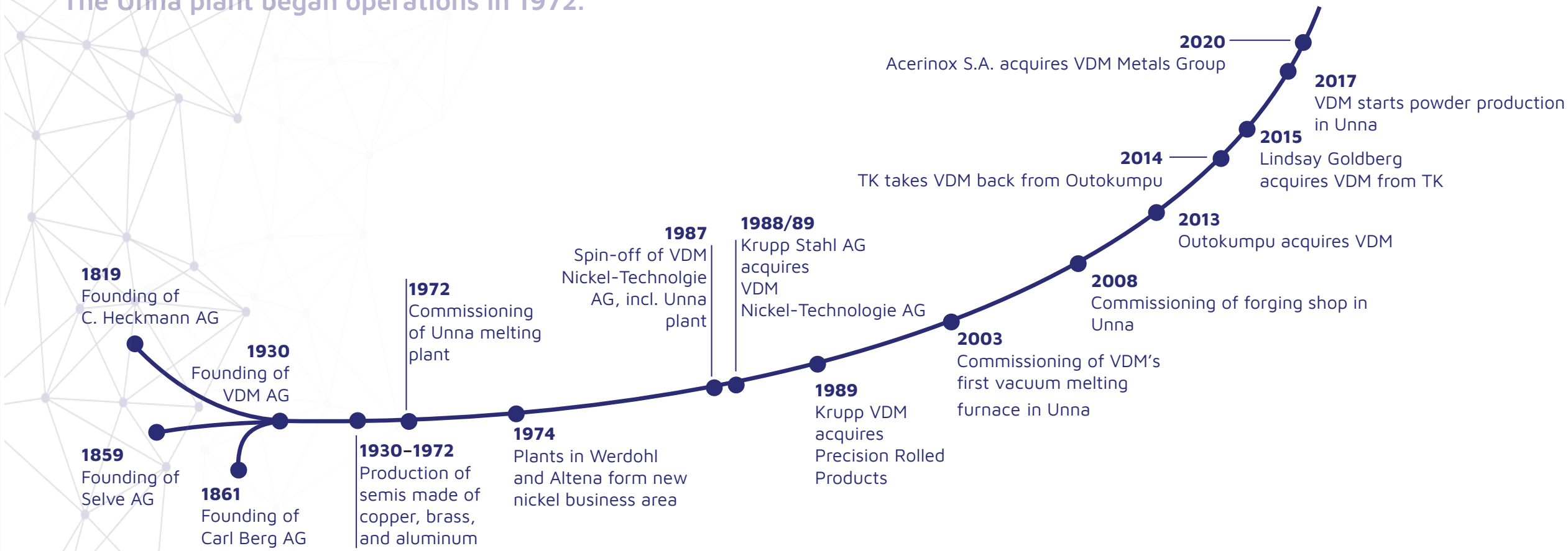
## Unna

# More about our HPA plant

Home to the HPA division’s melting productions, forged bar finishing line, and powder manufacturing facilities

# History – Unna Plant

**VDM Metals has combined tradition and innovation for over half a century.**
**The Unna plant began operations in 1972.**



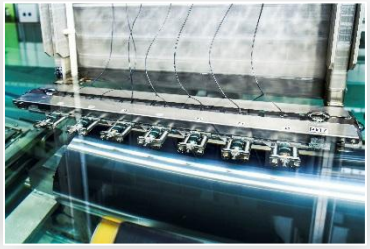
# Quality management and quality assurance – Unna Plant

Materials from VDM Metals undergo a strict quality control process.

## Quality control

- Metallography
- Corrosion Lab (Altena)
- Mechanical Lab (Altena, Werdohl)
- Chemical Lab (Werdohl)
- Physical Lab (Altena)
- Welding Lab (Altena)
- Ultrasonic Testing /
  Ultrasonic Immersion Testing



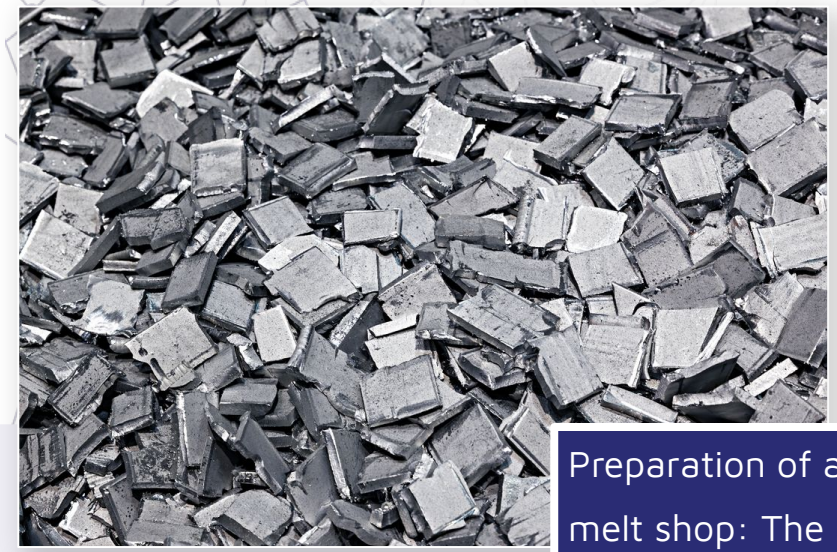



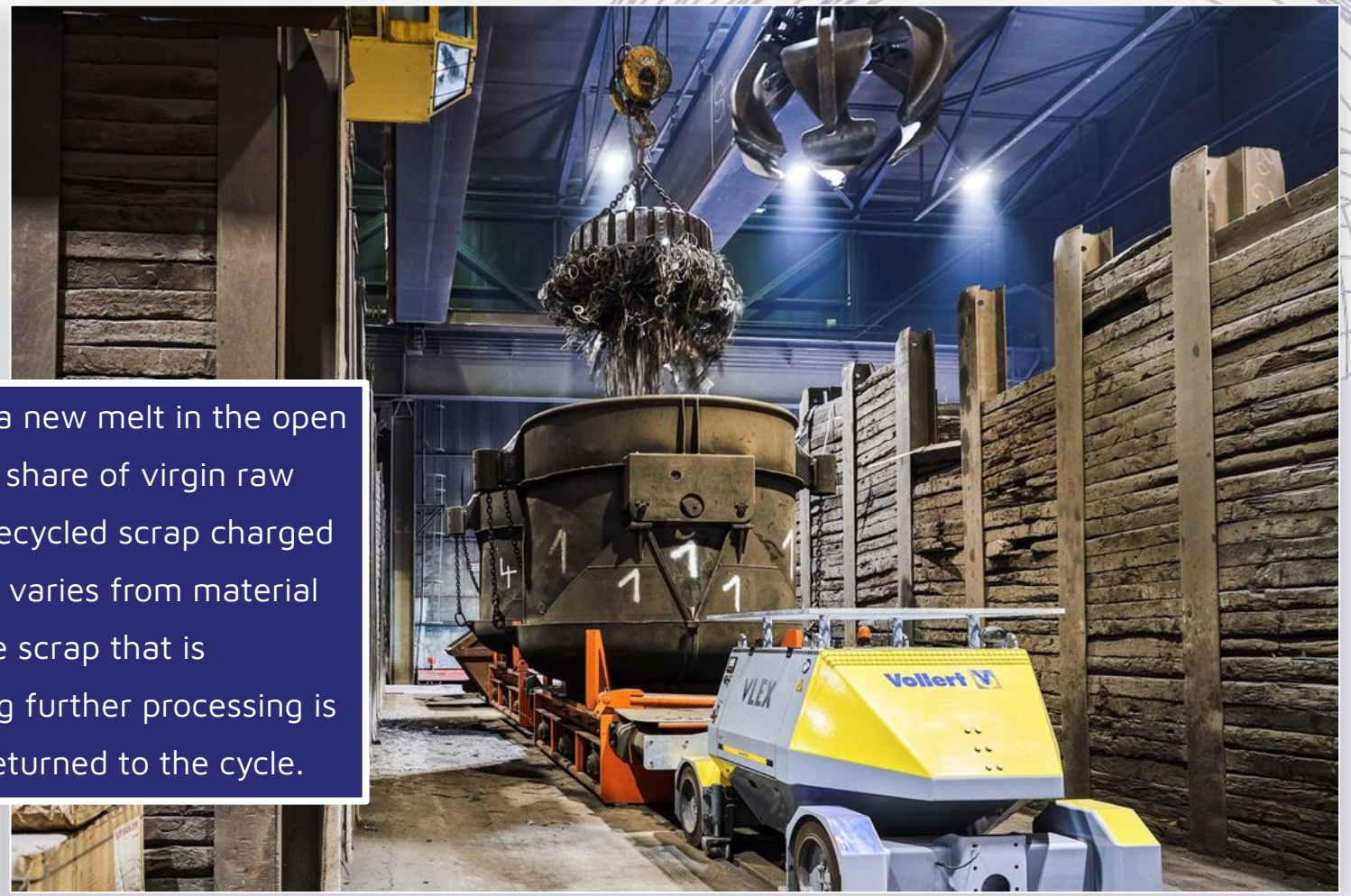
Products from VDM Metals meet the highest quality standards.

## Certifications

| | Organization | Certifications |
|---|---|---|
| Quality Management | TÜV NORD | ISO 9001<br>EN9100<br>NADCAP<br>AD 2000<br>ISO/IEC17025 |
| Environment and Energy Management | afnor NORMALISATION | ISO 14001<br>ISO 50001 |
| Information Technology Management | TÜVRheinland® | ISO/IEC27001 |
| Occupational Health and Safety | TÜV NORD | OHSAS 18001<br>DIN Spec. 91020 |

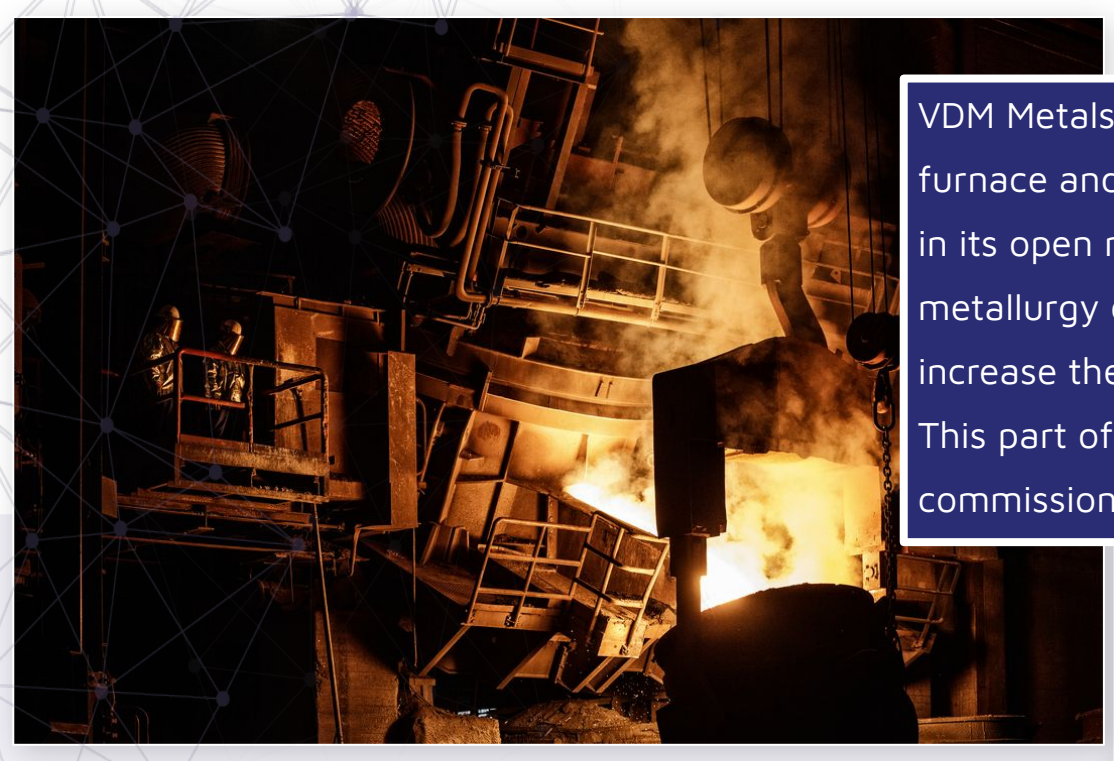
# Melting preparations – Unna Plant






Preparation of a new melt in the open melt shop: The share of virgin raw materials and recycled scrap charged to the furnaces varies from material to material. The scrap that is produced during further processing is collected and returned to the cycle.

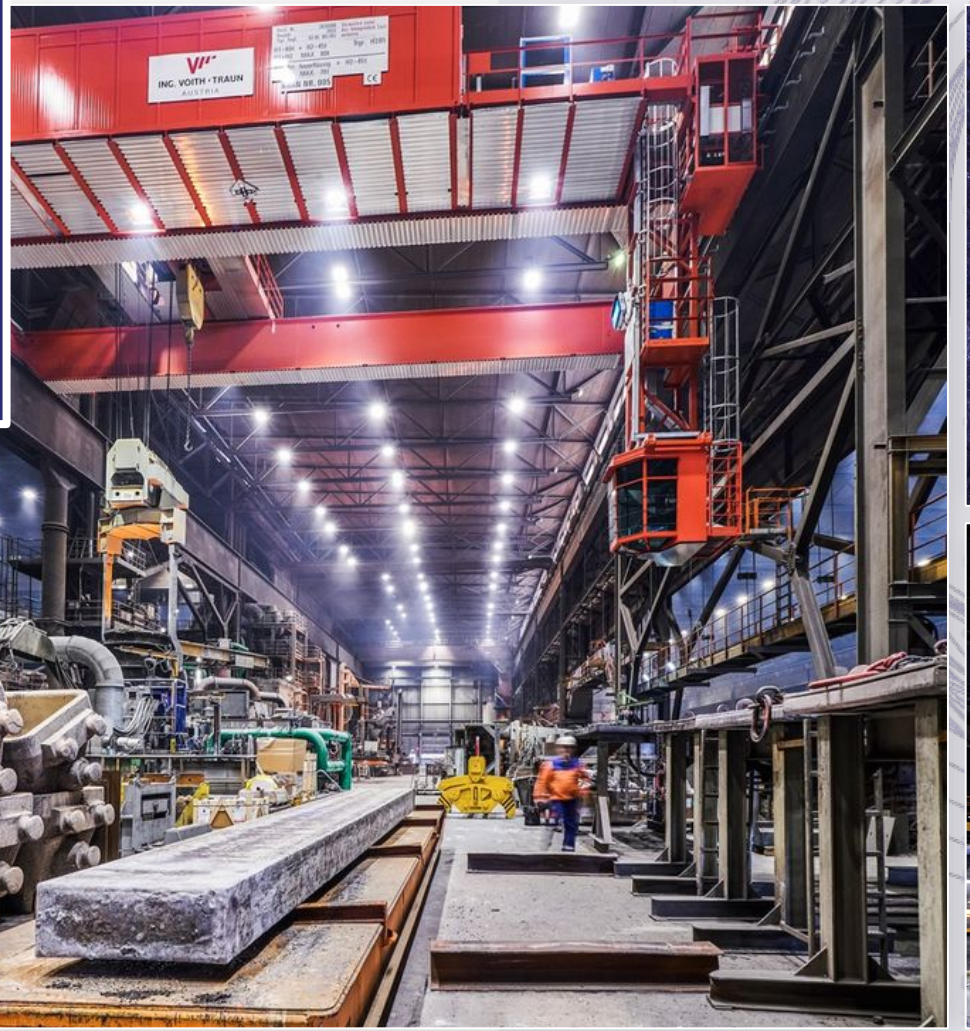
# Open melting – Unna Plant



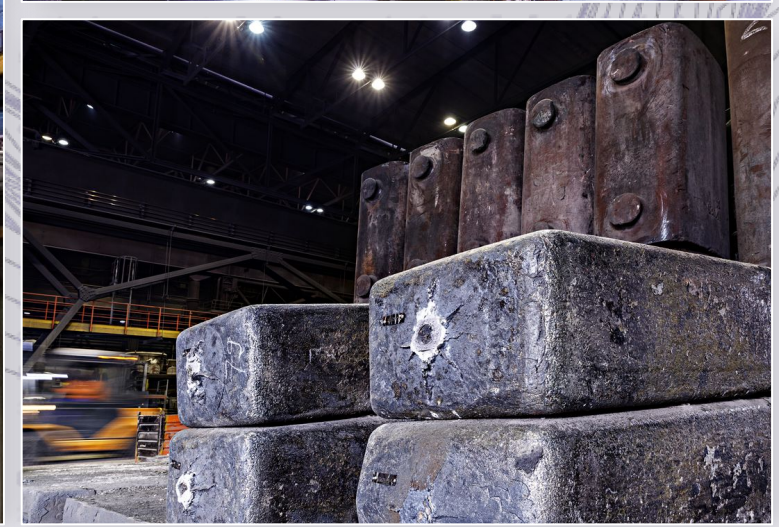
VDM Metals operates an electric arc furnace and three induction furnaces in its open melt shop. Secondary metallurgy equipment is used to increase the purity of the materials. This part of the plant was commissioned in 1972.

# Casting – Unna Plant

Casting in the open melt shop takes place in a vertical continuous caster or by ingot casting. VDM Metals uses the cast and/or remelted slabs or ingots as pre-material for the production of sheets and plates, strips, rods, bars, forgings, and wires.





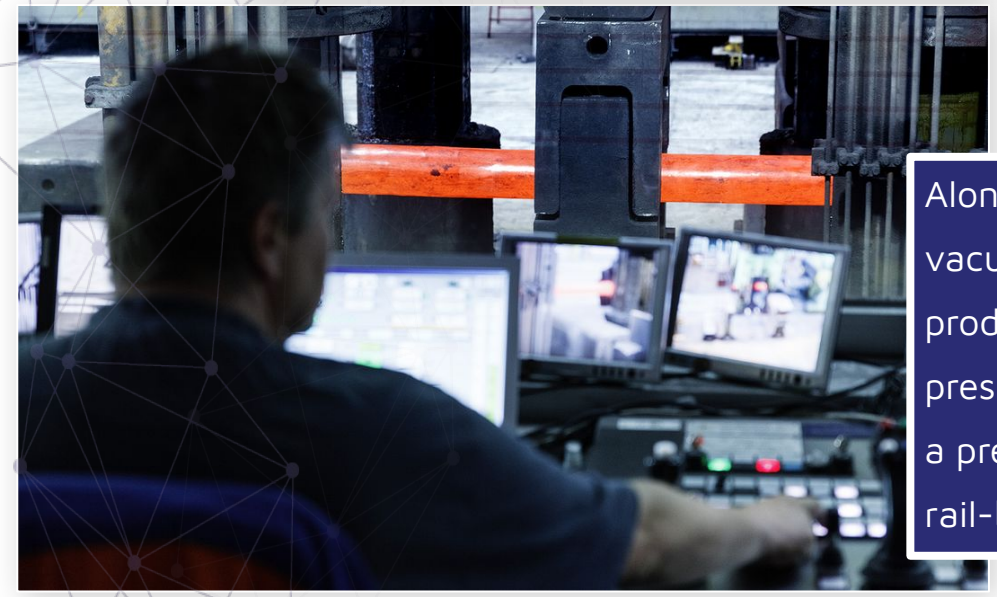



# Vacuum melting and remelting – Unna Plant

In addition to its use of conventional open-melting technology, VDM Metals also operates a vacuum-induction melting (VIM) furnace to produce highest-quality ingots. The materials' homogeneity and purity can be enhanced by remelting via electroslag remelting (ESR) or vacuum arc remelting (VAR).

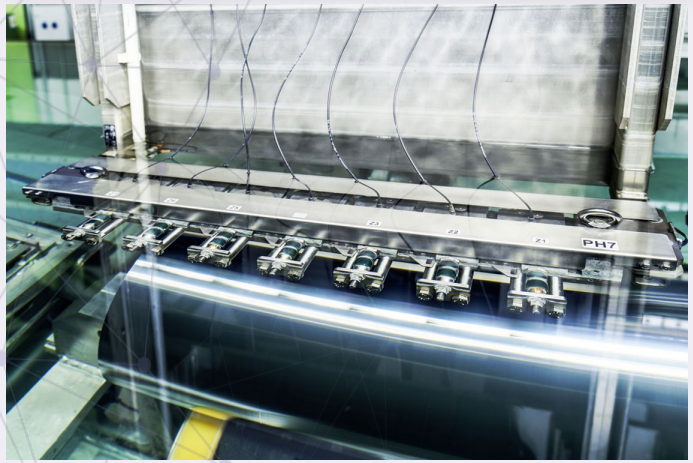
# Forging – Unna Plant

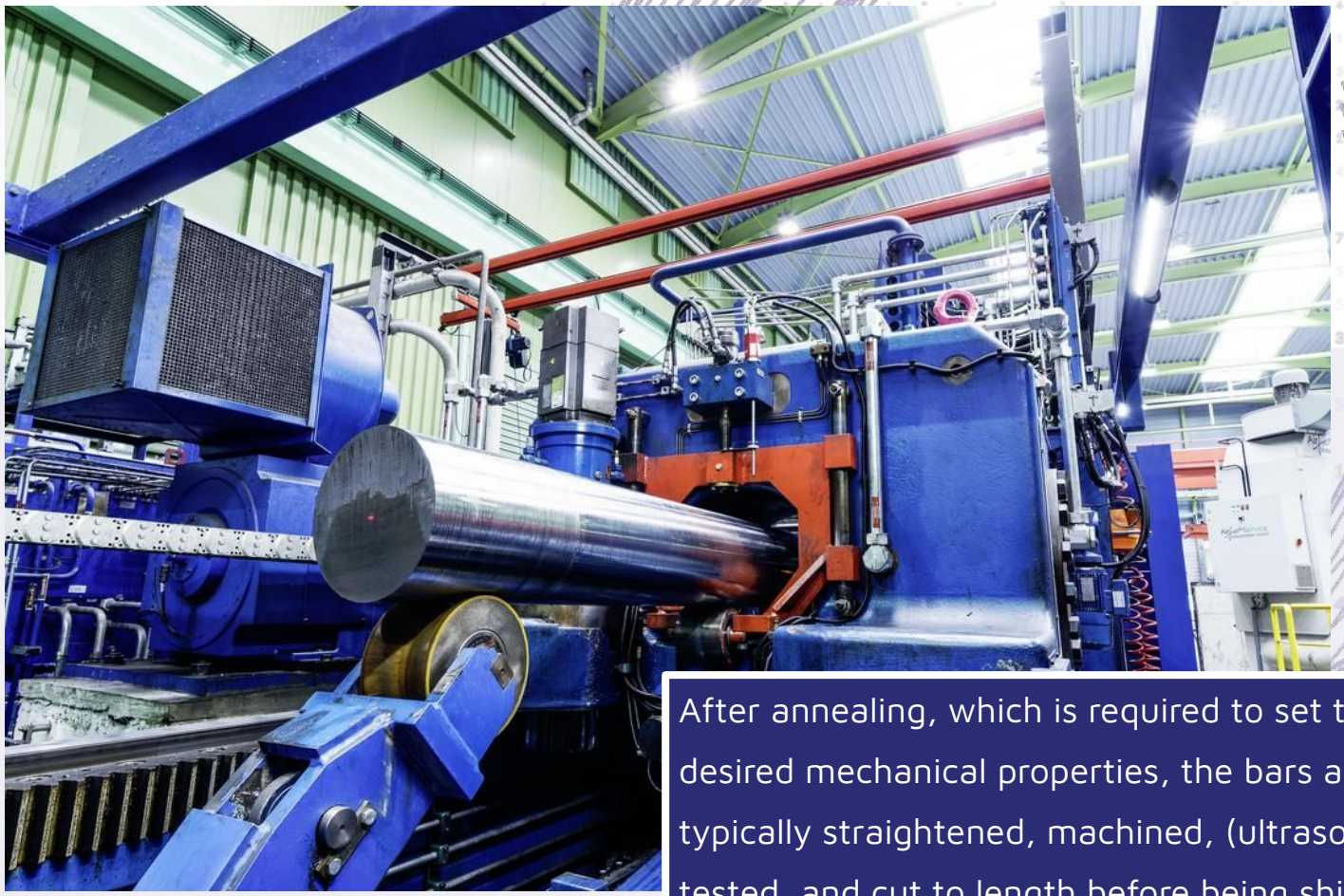




Alongside its operation of open and vacuum/remelting melt shops, VDM Metals also produces forged bars in Unna. The open-die press used to forge ingots to bars operates with a pressure of up to 4,500 tons and uses two rail-bound manipulators.

# Bar production – Unna Plant





After annealing, which is required to set the desired mechanical properties, the bars are typically straightened, machined, (ultrasonic) tested, and cut to length before being shipped to customers around the world.

# Powder production – Unna Plant

A vacuum inert gas atomization plant (VIGA) forms the core of the powder manufacturing facility. The entire process takes place under vacuum and inert gas conditions, to ensure the highest possible purity.

# Thank you!

Acerinox, S.A.
c/ Santiago de Compostela 100, 28035, Madrid. Spain

**investor.relations@acerinox.com**