



Low water – what have we learned from 2018?

18.01.2023

thyssenkrupp Steel Europe AG - Upstream Operations / Hot Metal; Kathrin Hülswitt

engineering.tomorrow.together.



thyssenkrupp

thyssenkrupp Steel Europe – Inbound volume Rhine: ~ 25 Mio. t raw materials

Ideal location for efficient raw material supply



tk Veerhaven



- Largest pushboat fleet on Rhine
- Transportation cap.: > 20 Mio t/a
- Part of tkSE group

EECV



- Second largest bulk terminal in Europe
- Discharging cap.: > 29 Mio t/a
- Part of tkSE group

Port Schwelgern



- Port cap.: > 25 Mio t/a



thyssenkrupp Steel Europe – Outbound volume Rhine: ~ 4 Mio. t finished & semi-finished goods

Centralised supply chain steering from tkSE port Duisburg-Walsum/Schwelgern to various ports



Restricted transportation capacity due to low water is putting raw material supply for tkSE at risk

Key results 2018

Findings

- Use of alternative modes of transportations only very limited due to availability as well as infrastructural/technical restrictions
- Significantly reduced transportation capacity due to the use of motor vessels instead of pushers (4 barges)
- Increased handling efforts onsite
- Production needed to be adjusted to raw material supply

Risks / Consequences

- Cost increase by use of other modes of transportation
- Cost increase due to inefficiencies e.g. additional discharging capacity, handling
- Supply shortage for customers
- Long term perspective: Potential risks for continuity Hot Metal operations in Duisburg

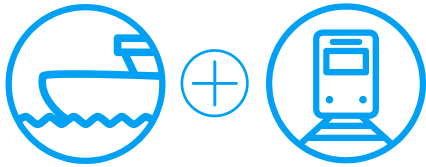


Implemented and ongoing actions at tkSE reduce risks but improvements regarding infrastructure e.g. 8-Punkte-Plan are mandatory



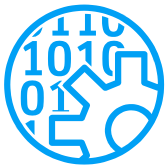
Onsite / near site:

- Optimisation of handling capacity onsite
- Increase of onsite inventory, additional storage capacity for raw materials onsite and near site



Transport capacity:

- Contracting additional long term train transportation capacity
- Evaluating options to reduce the draft of pushers as well as CO2 emissions



Digitalisation:

- Improved L2 + L3 Systems, Tracking & Tracing, Barge tracking



Required improvement on infrastructure:

- Accelerated implementation of infrastructure projects incl. sufficient financial funding
- Strong communication between political / administrative parties involved, logistics and industry



Preliminary key results low water 2022

Findings

- Early and extrem low water period, not predicted by major fcst institutes
- Extremely difficult market for motor vessels to compensate for lower intake and pushers. Many vessels contracted for coal transportation to power plants.
- Slight Covid impact on workforce even during summer months
- Implemented higher inventory raw materials partially mitigated loss of transportation capacity
- Implementend communication routines are efficient

