

KOERNER *kk*[®]



kk[®]
PICKLING PLANTS

for stainless steel and tube products



KOERNER

MANY YEARS OF EXPERIENCE IN PLANNING AND CONSTRUCTION OF PICKLING PLANTS.

Together with our customers, we analyse the requirements that are necessary for achieving the goals. Building on this, we work with our business partners to create tailor-made concepts for optimum material flow, taking into account the specific requirements of the respective products.

STAINLESS STEEL

Surface treatment in the dipping process for

- Pipes
- Profiles & bars
- Plates
- Wire coils
- Special parts
- Job order pickling
 - pickling (also all mixed acids)
 - passivation
 - rinsing etc.

With decades of experience, **KOERNER** has developed components whose longevity pays off, especially in the extremely corrosive atmosphere of **mixed acid pickling**.

Advantages:

- Long life of the components
- Fulfilment of the strictest environmental requirements
- Minimization of production costs

Fire resistant

Scientific test reports from official test institutes have confirmed the significantly higher fire resistance of the **kk**-panel, in comparison to PP and PE panels. The PP and PE plates burn quickly, producing burning drops, which accelerate the impact of the fire.

kk-tanks are fire retardant, which means that a fire is unlikely to get out of control in a pickling facility.





Encapsulated tube pickling plant
Tank dimensions: 11.0 x 1.2 x 1.65 m



Pickling tank for HF + HNO₃
Tank dimensions: 13.9 x 1.5 x 3.3 m

TUBE

Encapsulated metal pickling lines according to the **kk**-system

The surface treatment of steel tubes (carbon steel) requires numerous process steps such as degreasing, pickling, activating, phosphating, neutralizing and soaping, each of it must be carried out at a very specific and mostly high temperature level.

Depending on the used pickling medium, this leads to **significant acid emissions**, which spread in the surrounding production area. In traditional, open systems, this means high **energy losses**, **corrosion** on cranes, buildings and stored material as well as problems with **workplace safety** (MAK values), which cannot be fully controlled even by using lateral fume extraction channels.

The crane system and other sensitive parts of the plant, such as pumps and sensors, are protected from emissions, which makes it possible to use state-of-the-art technology and operate a **fully automatic pickling plant**. During normal operation, there is no personnel in the pre-treatment plant.

Advantages:

- Automatic pickling process
- Low maintenance costs by eliminating acid fumes
- Optimal workplace conditions
- Compliance with strict environmental regulations
- Total process monitoring



Outside encapsulated pickling plant



Inside encapsulated pickling plant



Pickling tank for H₂SO₄ with stainless-steel frame
Tank dimensions: 16.0 x 1.3 x 1.7 m

REFERENCES

Tube

Mubea Präzisionsstahlrohr AG (formerly Forster), Arbon, CH
 Tubos Reunidos Industrial, Amurrio, ESP
 Salzgitter Mannesmann Stainless Tubes Deutschland GmbH,
 Remscheid, DE
 Mannesmann Precision Tubes France SAS (formerly
 Vallourec), Vitry, FR
 BENTELER International AG, Paderborn, DE
 TAP-Tubos de acero de precisión, S.L.U., Sant Ramon, ESP
 Buntmetall Amstetten GmbH (Wieland Group),
 Enzesfeld, AUT
 Jansen, Oberriet, CH & Dingelstätt, DE

Stainless steel

SIJ Acroni d.o.o., Jesenice, SLO
 Centraviv Production Ukraine PJSC, Nikopol, UA
 Ernst-Leo Krick GmbH, Mülheim a. d. Ruhr, DE
 Huber SE, Berching, DE
 Salzgitter Mannesmann Stainless Tubes Deutschland GmbH,
 Remscheid, DE
 Schoeller-Bleckmann Edelstahlrohr GmbH, Ternitz, AUT
 Tubacex S.A., Llodio, Amurrio, ESP
 voestalpine BÖHLER Aerospace GmbH & Co KG,
 Kapfenberg, AUT
 Sinarsky Pipe Plant (TMK Group), Sverdlov Region, RUS



voestalpine BÖHLER Aerospace
 fully automatic pickling plant for stainless-steel forgings

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