# ANDRITZ KFT. INNOVATIVE TECHNOLOGIE FOR THE PLANET A GLOBAL PARTNER FOR KEY INDUSTRIES THAT SHAPE THE WORLD

IGINEERED SUCCESS



**ENGINEERED SUCCESS** 

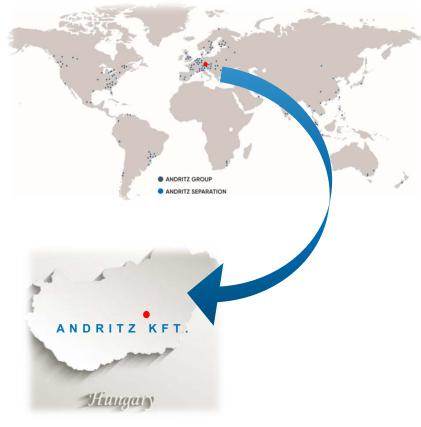
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### ANDRITZ KFT. PART OF ANDRITZ HYDRO





### **PROFILE ANDRITZ KFT.**

### Overview

Address

History

ANDRITZ Kft. Dózsa telep 69, 6060 Tiszakécske – Hungary

Founded in 1929 nationalized in 1947 privatized in 1994 acquired by ANDRITZ AG in 2007 HYDRO VA TECH HYDRO 2006 2007 Tigép - Andritz KFT GE Hydro busines GEHI (JV) Precision Machine 2010 Hammerfest Strøm 2010 Ritz 2011 Hemicycle Controls 2018 HMI

#### Manufacturing and Assembly

Hydro Pulp and paper Power generation Siemens

ANDRITZ Siemens Energy



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Main Customers



### **KEY FIGURES**



#### Capacity:

• 225.000 – 300.000 Direct labour hours

#### Staff:

• 250-300 employees

#### Area:

- 147.000 m2 total area
- 31.159 m2 building

#### Applied material grades:

• Carbon steel, Fine-grained steel, Martensitic Steel, Austenitic Steel, Duplex alloy, Inconel alloy, Ni based alloy, etc.



**CORE COMPETENCE** 

### Quality Control: Non-destructive testing (VT, PT, MT, UT, RT)



ISO 9001:2015





ISO 14001:2015

AD 2000-Code

EN1090-1:2009+A1:2011



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ISO 45001:2018



CHINESE Pressure Vessel Manufacturing License



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### Fabrication

- Metal cutting gas cutting: thickness 2 – 300 mm; plasma cutting: thickness 1 – 80 mm; water cutting: thickness 0,5 – 30 mm
- Rolling in sheet thickness up to 125 mm and width 3.500 mm, smallest rolling diameter: 1.260 mm
- Welding technologies (MIG/MAG, SMAW, TIG, NGW, SAW, Laser welding)









Laser Welding of stainless steel



#### Heat treatment

- Stationary heat treatment furnace (10 x 5 x 5 m) up to 1.200 °C
- Mobile heat treatment equipment (9 x 9 x 6,5 m) up to 650 °C



### Surface treatment

- Materials used: AMERON, INTERNATIONAL, SIKA, AVENARIUS AGRO, HEMPEL, JOTUN two-component epoxy and polyurethane paints
- Dimensions of painting compartments: 15.000 x 8.000 x 8.000 mm
   10.000 x 8.000 x 8.000 mm
   15.000 x 7.000 x 8.000 mm
- Dimensions of blasting compartments: 15.000 x 7.400 x 7.000 mm 14.000 x 6.700 x 7.900 mm 14.000 x 6.700 x 7.900 mm
- Dimensions of washing compartment: 10.000 x 8.000 x 8.000 mm

Surface treatment

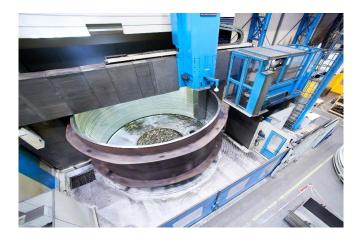
- Ceramic blasting (stainless steel)
- Sand blasting (carbon steel)
- Washing cabin
- Painting



### A

### MAIN ACTIVITIES / TECHNOLOGIES

### Turning and milling of complex parts on CNC controlled machines



Waldrich vertical lathe:

- Max. product weight on rotating table: 200t
- Rotating table diameter: 6.000 mm
- Max. machining diameter: 6.500 mm
- Max. machining height: 4.000 mm

Schiess vertical lathe:

- Max. product weight on rotating table: 150t
- Rotating table diameter: 7.000 mm
- Max. machining diameter: 12.000 mm
- Max. machining height: 4.150 mm





PAMA horizontal boring mill:

- Max. product weight: 200t
- Length 24 m, vertical 6 m, depth 2.6 m



### In-house Assembly



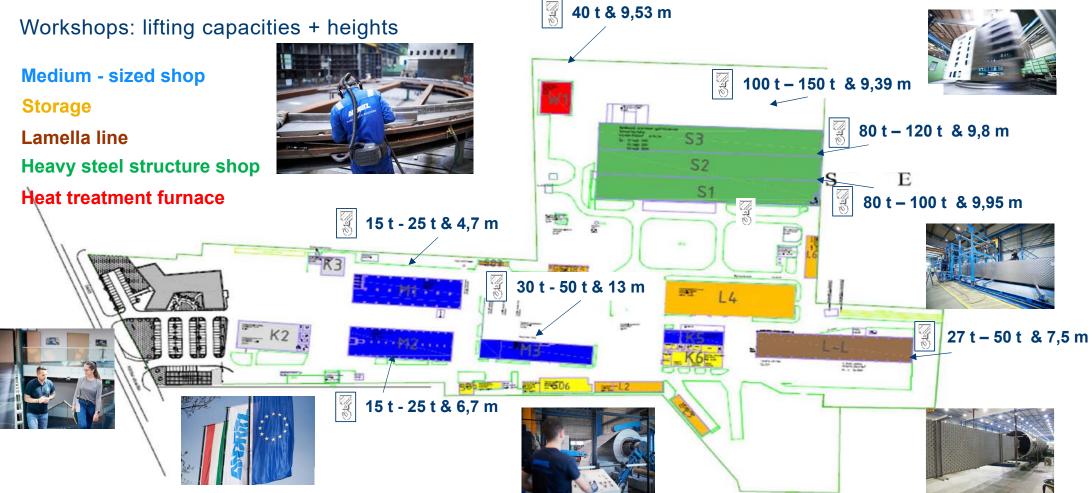


Yankee cylinders

Butterfly valve and spherical valve

Combustion chamber

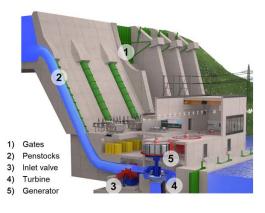
### LAYOUT ANDRITZ KFT.



#### Large Hydro division

**Stator Frame** 







#### Valve

Butterfly valve, Spherical valve **Material:** S355J2+N, S235J2G3, 1.4301, 1.4571 **Dimension:** up to 7 m od, 150t **Scope:** material purchasing, welding, machining, assembly

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Vertical / Horizontal, Divided / Undivided

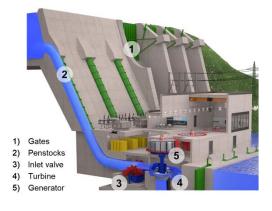
Material: S355J2+N, S235J2+N, 1.4301, 1.4429

Scope: material purchasing, welding, machining

**Dimension:** 5t up to 80t, up to 11,7 m od, 4,5 m heights

#### Large Hydro division







#### Head cover

Material: S355J2+N

**Dimension:** up to Ø 8 m, 64 tons

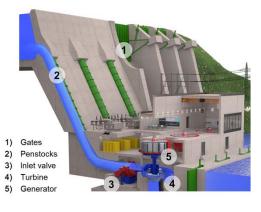
Scope: material purchasing, welding, machining, assembly

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Bottom ring Material: S235J2+N, S235J2G3 Dimension: up to Ø 6,75 m, 18 tons Scope: material purchasing, welding, machining

#### Service & Rehab division







#### Shaft with ribs

(incoming forged shaft) **Material:** S420, S460, 20Mn5, S355J2+N **Dimension:** up to 80 t, 5,3 m length **Scope:** material purchasing, welding, machining

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#### **Rotor spider**

(with or without arms)

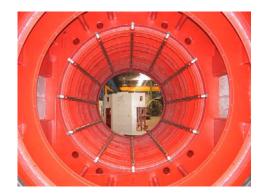
Material: S355J2+N+Z35, S275J0+N, S355J0+N, S235JR

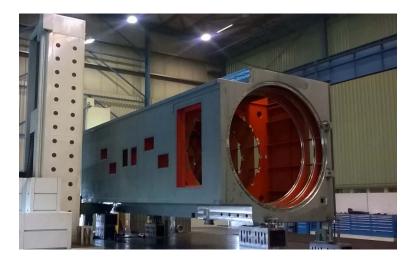
Dimension: up to 80 t, 6,6 m od, 3 m heights

**Scope:** material purchasing, welding, machining

#### Turbo division







#### Air cooled generator casings + components

**Material:** S355J2+N, S235JR, S235J0+N, P265GH, 1.4541 **Dimension**: up to 83 t, 10 m length

Scope: material purchasing, welding, machining

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#### H2 cooled Generator casings + components

Material: S2355JR+N, S235J2+N, P265GH, 1.4301, 1.4541 Dimension: up to 120 t, 11 m length Scope: material purchasing, welding, machining

# ANDRITZ KFT. SUPPLIER FOR SEPARATION GROUP

#### Separation division







#### **Pump cover**

Material: S235J0+N, S355J0+N Dimension: up to 3,8 m OD, 16.000 kg Scope: material purchasing, welding, machining

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#### Spiral casing + pit liner

Material: S355J2+N, S460NL, S235J0, 1.4301 Dimension: from inlet size 1,6 m, up to above 3 m, 8 m OD Scope: material purchasing, welding, machining, assembly

# ANDRITZ KFT SUPPLIER FOR PULP & PAPER GROUP

#### Pulp division







#### Lamella

Material: 316L, S32304 Duplex, 304L

Dimension: Heating surface / lamella: 21-44 m<sup>2</sup>,

up to 11 m length, 2 m width

Scope: water jet cutting, laser welding, inflation, pressure test, assembly

#### **Evaporator + internals**

Material: 316L, S32304 Duplex, 304L Dimension: 35 t, shell length 10 m, 2,5 m OD Scope: material purchasing, welding, machining, pressure test, assembly

# ANDRITZ KFT SUPPLIER FOR PULP & PAPER GROUP

### Paper - KEY COMPONENTS - PrimeDry Steel Yankee







#### Yankee cylinder

Material: P355NH

**Dimension:** up to 7,3 m OD, 6,2 m length, 146 t **Scope:** material purchasing, welding, machining, pressure test, finishing, assembly, site welding

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#### Diameters up to 26 ft.

Unique engineering, manufacturing, and logistics concepts

10-15% higher evaporation rate than cast iron models – results in 8-10% better machine performance

With Yankee head insulation for savings in steam in the range of 2-5%

# ANDRITZ KFT SUPPLIER OF THE ANDRITZ PULP & PAPER GROUP

Paper division





**Plated beams** 

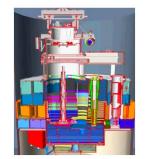
(Wire section, Inner/outer wire, cleaning module, TAD frame)
Material: S235J0+N, 1.4404
Dimension: up to 180 t, 13 m length
Scope: material purchasing, welding, machining

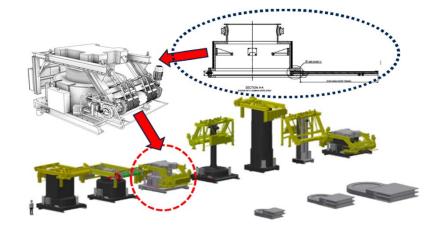
Steel drying cylinder Material: P355NH+Z35 Dimension: 7,5 t, od 1,9 m, length 4 m Scope: material purchasing, welding, machining, pressure test, finishing, assembly

### ANDRITZ KFT SUPPLIER OF SCIENT INDUSTRY









#### Cask3 + gamma gate

Material: S355J2

**Dimension:** 18 t, 3,7 \* 3,6 \* 2,3 m **Scope:** material purchasing, welding,

machining, painting

# The European Spallation Source is one of the largest science and technology infrastructure projects being built today.

The ESS is an experimental neutron source based on 2.5 GeV proton beam impinging on a tungsten solid target. Central to the facility is the Target Station where high-energy proton pulses are directed to the Target Monolith to strike a target of rotating tungsten blocks where spallation occurs generating a vast number of neutrons.

### ANDRITZ KFT SUPPLIER OF SIEMENS ENERGY





Mixing chambers Material: NiCr23Co12Mo, Inconel617 Dimension: 3,2 \* 2,3 \* 2,3 m Scope: material purchasing, welding, machining



### Turbine Exhaust Casing Material: X6CrNiTi18-10 Dimension: 4,2 \* 4,2 \* 1,8 m Scope: material purchasing, welding, machining



#### **Combustion chambers**

Material: 16Mo3

**Dimension:** 21 t, 3,5 \* 2,9 \* 4,9 m **Scope:** material purchasing, welding, machining, pressure test, final assembly incl. gas burners and electricity installation

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