

Drive technique solutions from Watt Drive for the smelter- and steel industry.

Watt Drive, as a specialist for drive solutions in the steel industry supplied the company SSC Anlagenbau GmbH based in 8605 Kapfenberg with drive technique for a dip tank manipulator with a transport roller conveyor, weighing- and discharge equipment. For that MAS[®] helical bevel -, parallel shaft- and shaft mounted geared motors have been used.



Task:

The task of the plant is the manipulation of forgings from the roller conveyor into a dip tank (Picture 1) and to the deposit and transportation area.

Plant description:

A 22 m long, very stable construction with a lever serves to be the dip tank manipulator, which has the task to lift and transport hot, up to 8 tons heavy forgings of various dimensions and temperatures out of a roller conveyor to a certain position and deposit it into a dip tank with exact positioning.

Work piece parameter:

- Unit weight: < 8 tons
- Cross section: 110 - 650 mm
- Length: 1500 - 20500 mm
- Temperature: < 1000 °C
- Forging following time: > 3 min



Picture 1: Dip tank manipulator

The forgings are additionally weighed with the integrated weighing equipment onto the roller conveyor and after the dipping they are lifted out of the dip tank, are positioned onto the roller conveyor and are delivered for further transport to various discharge equipments.

The control of the dip tank manipulator processes and files the process parameters for every forging, like for instance temperature, weight, position of dipping and dipping duration. A visualisation displays the complete process of the manipulation of the forgings.

Example: Transport roller conveyor drives for the delivering of the forgings

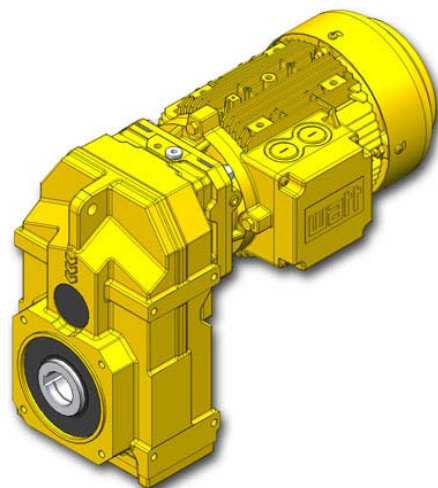
The rollers of the mounted roller conveyor are supported double-sided. Every second roller is driven. The geared motors are merged into multiple groups and controlled with a frequency inverter in a 100Hz operating mode.

Roller conveyor data:

Length:	50 running metre
Roller pitch:	700 mm
Speed:	62 m/min

Technical data of the geared motor (Picture 2):

Type:	ASA 66A 101L4 TH
Power P ₁ :	4,40 kW
Output speed n ₂ :	91 U/min
Torque M ₂ :	460 Nm
Lubricant:	CLP ISO PG VG 460
Special design:	Hardened shaft with a FPM/HNBR seal
Voltage:	400V, 100Hz, YY
Protection class:	IP65/F
Winding shield:	TH



Picture 2: WATT shaft mounted geared motor
ASA 66A 101L4 TH

For further information concerning the WATT product programme please visit our website www.wattdrive.com.