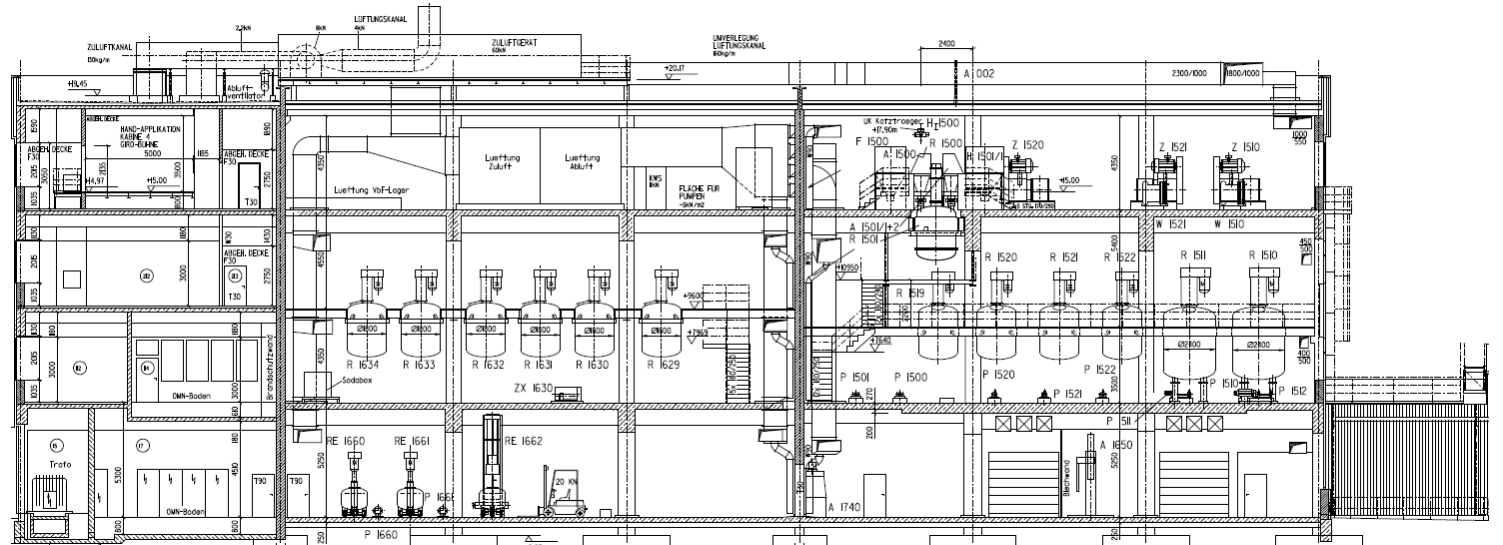
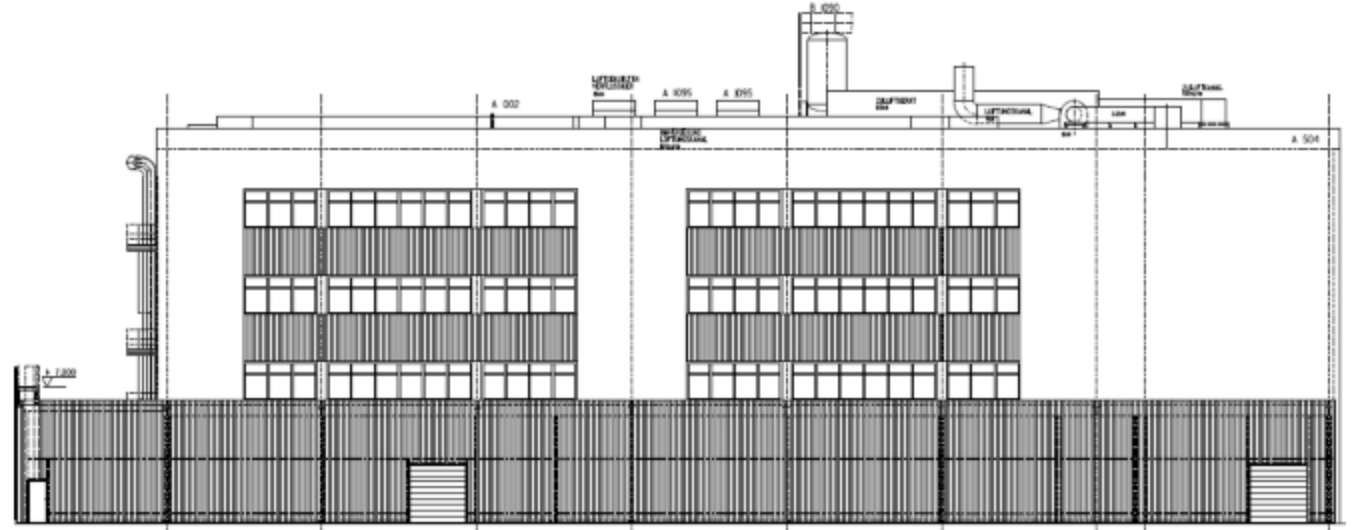


Coating plant Schwarzheide

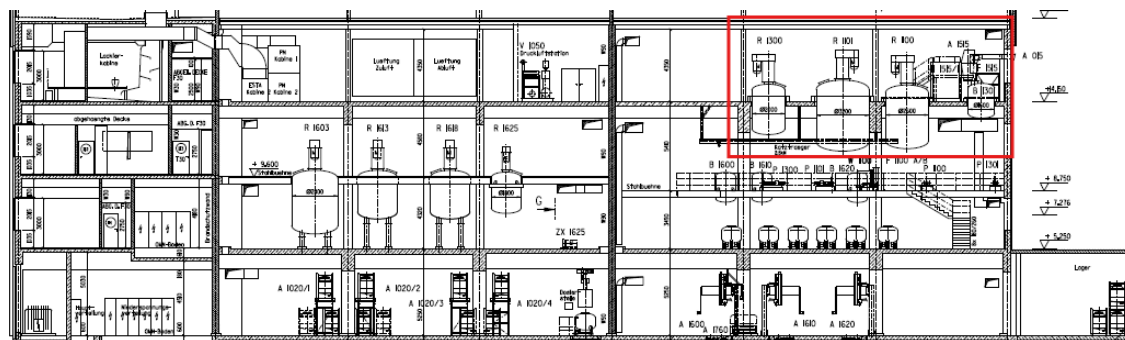
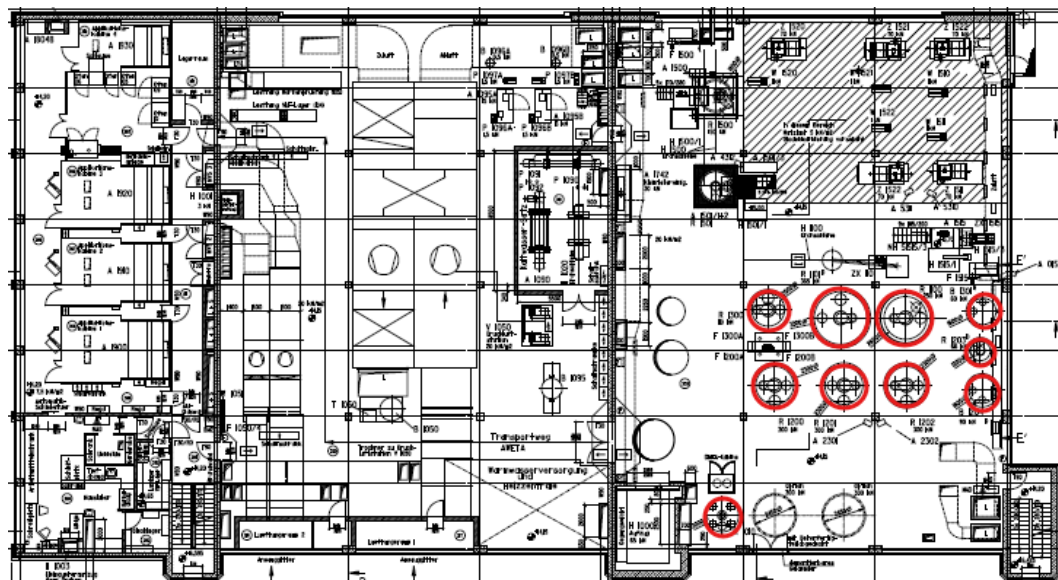
Technological Profile

Technological Profile – Coatings Plant Schwarzheide





Production building A504 – 14m level



8 stirring vessels

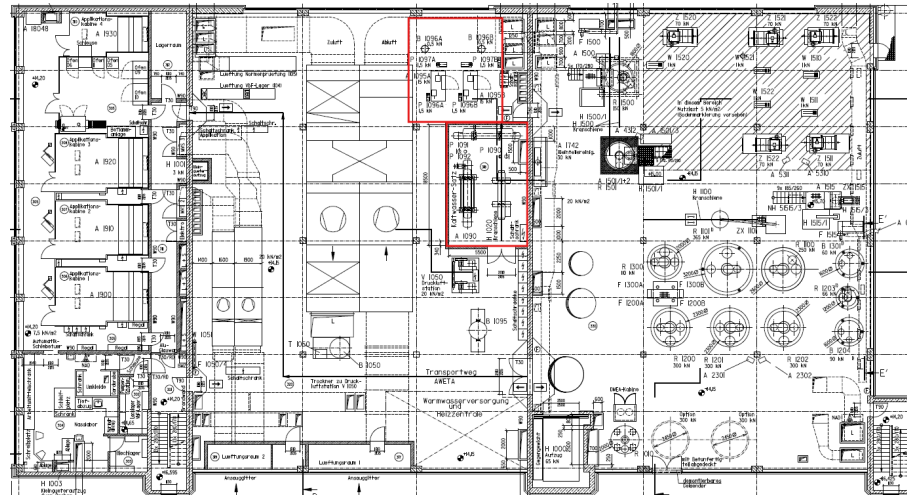
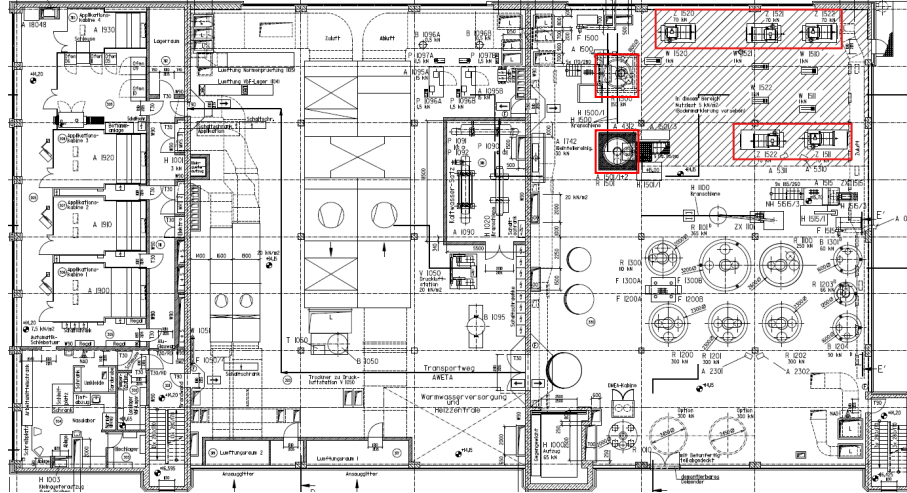
R1203	2.4 m ³	beam stirrer (3-st.)
R1204	6.8 m ³	beam stirrer (3-st.)
R1010	5.2 m ³	propeller stirrer
R1300	8.7 m ³	beam stirrer (3-st.)
R1301	3.6 m ³	beam stirrer (3-st.)
R1200	15.8 m ³	beam stirrer (3-st.)
R1201	15.8 m ³	beam stirrer (3-st.)
R1202	15.8 m ³	beam stirrer (3-st.)
R1100	18.2 m ³	beam stirrer (3-st.)
R1101	30 m ³	beam stirrer (3-st.)

Discharge pumps (all 1.4408)

P1204, gear pump, 8.0 m³/h, 110m
 P1010, centrifugal pump, 7 m³/h, 25m
 P1300, gear pump, 9.5 m³/h, 49m
 P1200, gear pump, 20 m³/h, 48m

P1100, ring piston pump, 16 m³/h, 40m
 P1101, gear pump, 12 m³/h, 13m
 P1201, gear pump, 20 m³/h, 48m
 P1202, gear pump, 20 m³/h, 48m

Production building A504 – 14m level



5 Ball mills (horizontal) → see [Deep Dive](#)

Stirring ball mills (1.4571)

Z1510/11	200 dm ³	2,000 – 5,000 kg/h	(pe = 4 bar)
Z1520 – 22 095A/B	200 dm ³	2,000 – 5,000 kg/h	(pe = 4 bar)

2 Dissolver

R1500	5.6 m ³	stirrer
R1501	5.5 m ³	heated (50°C), stirrer height-adjustable

Discharge pumps

P1500, 150101	gear pump, 3.5 m ³ /h, 120m
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Cooling systems (Units)

Cooling brine generation (ammonia)

A1090	600 kW	(by SEW)
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Water chiller

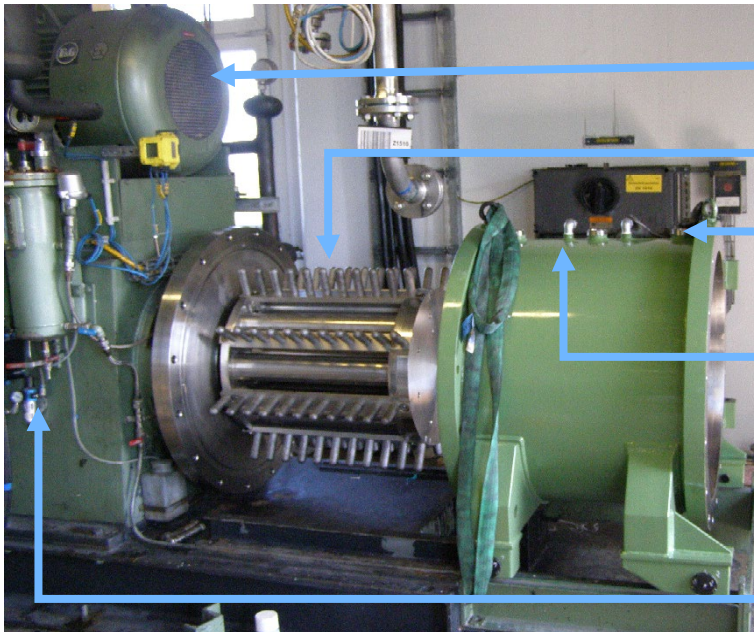
A1095A/B	each 274 kW	(by CIAS)
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Production building A504 – 14m level

Deep Dive → overview on assets for **Fine dispersion**



Ball mill
Centrifugal whirl bed mill
type: Netzsch ZWM 88



Electrical drive

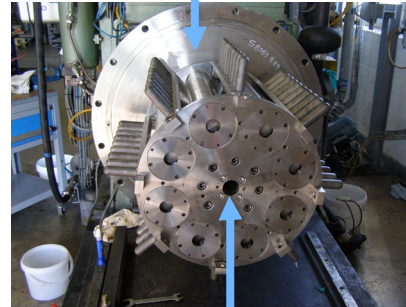
Rotor row and
slotted sieves

Grinding material
dosing

Temperature
controlled
double jacket

Hollow shaft for
grinding material
discharge

Sealing fluid system



- ❖ Grinding chamber dimensions
 - Diameter: 800 mm
 - Length: 735 mm
- ❖ Operating pressure: max. 6 bar
- ❖ Speed: 234/312 min⁻¹
Motor power consumption: 60/80 KW
- ❖ Sealing by mechanical seal
with forced circulation
- ❖ Fully automated flushing/cleaning
via process control system
- ❖ Current operating parameters (variable)
 - Grinding media quantity: 350 - 375 kg
(filling level: ~80 %)
 - Grinding media size: 0.4 - 0.8 mm
 - Max. throughput: 7.5 m³/h

Production building A504 – 14m level

Deep Dive → Setup for **Fine dispersion**



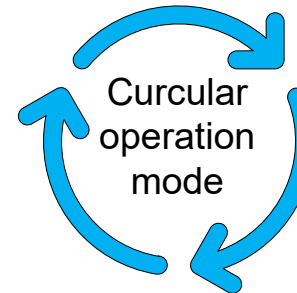
Raw material weighing
and predispersing
(2 x 5,6 m³)



Ball mill
ZWM 88 (5 pcs.)

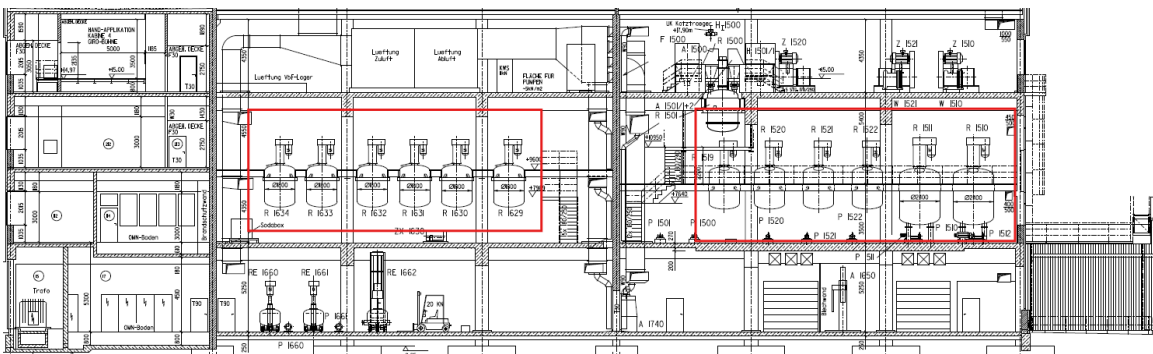
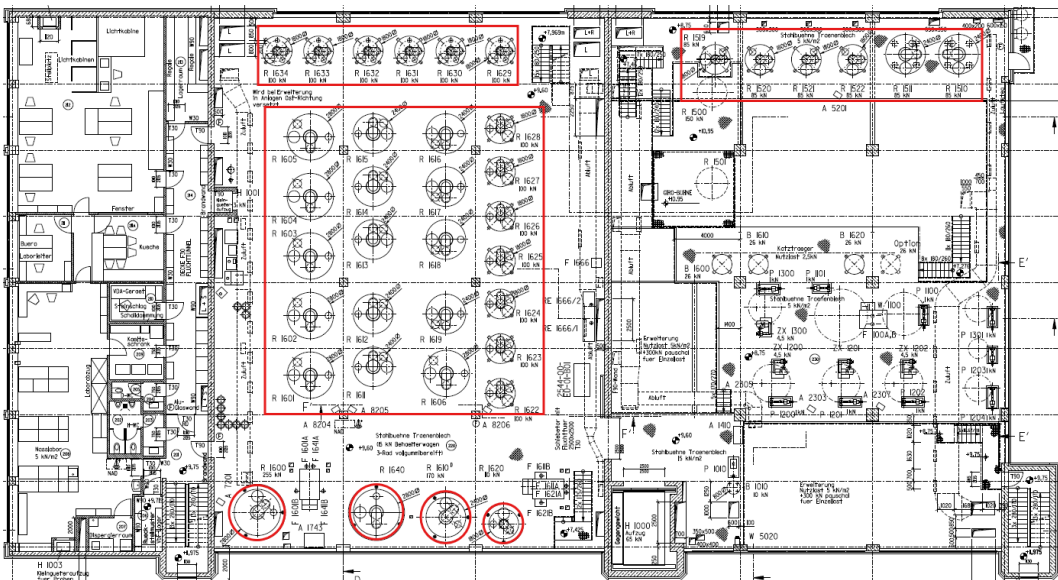


Plate heat exchanger



Circulation vessel
(3 x 5,6 m³ + 2 x 13,5 m³)

Production building A504 – 14m level



38 stirring vessels

R1519 – 22	5.6 m ³	beam stirrer (3-st.)
R1620	5.6 m ³	beam stirrer (3-st.)
R1622 – 34	5.6 m ³	beam stirrer (3-st.)
R1610	11.8 m ³	beam stirrer (3-st.)
R1611 – 19	11.8 m ³	turbine stirrer (6-blade)
R1510/11	13.5 m ³	beam stirrer (3-st.)
R1600	20 m ³	beam stirrer (3-st.)
R1601 – 05	16 m ³	turbine stirrer (8-blade)
R1640	21 m ³	turbine stirrer (8-blade)
R1641	21 m ³	turbine stirrer (8-blade)

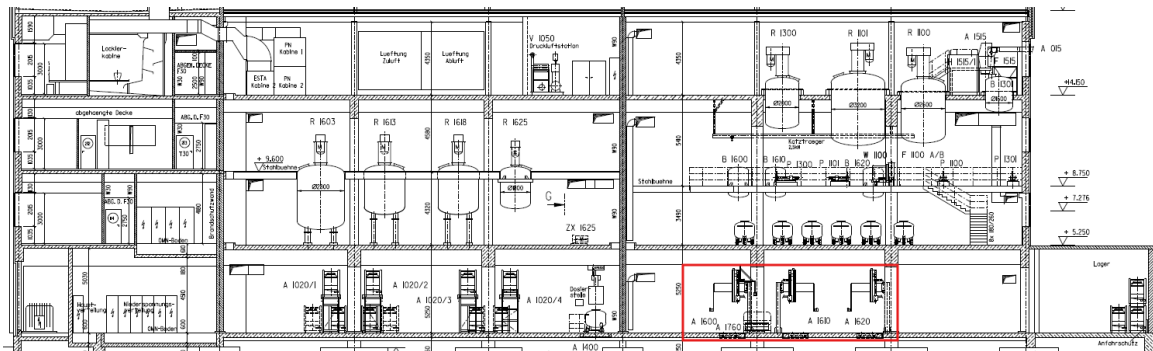
Transfer system from the mixing vessels R1600, 1610, 1620, 1640 to Finish vessels R1601 - 05, R1611 - 19, R1622 – 29/34, R1641; equipped with cleaning system (pipe pigging)

Discharge pumps

P1520, 1521, 1522	ring piston pump, 3,8 m ³ /h, 137m
P1605	ring piston pump, 8 m ³ /h, 9m
P1615, 1625	screw spindle pump, 5 m ³ /h, 27m

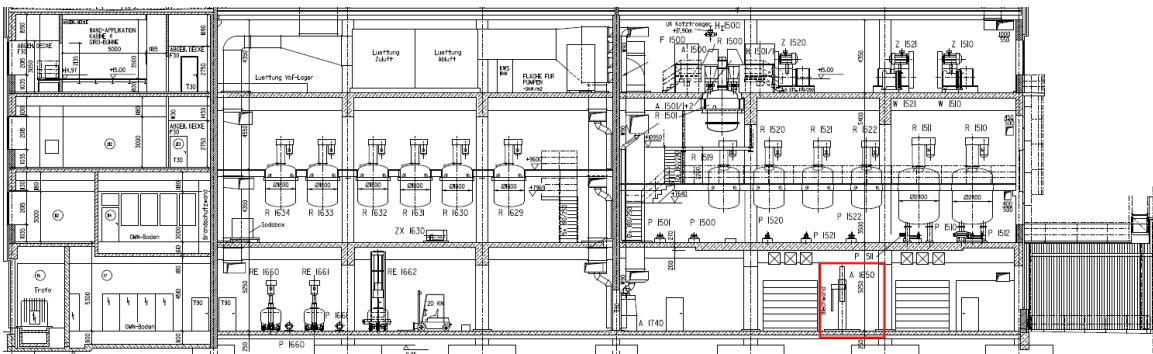
P1600, 1610, 1620, 1640	rotary piston pump, 15,7 m ³ /h, 100m
P1601, 1611, 1621, 1641	diaphragm pumpe, 10 m ³ /h, 120m

Production building A504 – 0m level



4 Filling systems with floor scale (1.4541)

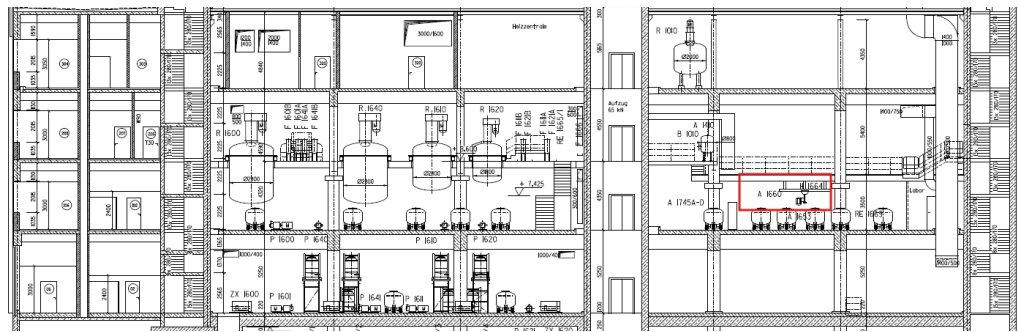
A1600	4 m³/h	(by ABEL)
A1610	4 m³/h	(by ABEL)
A1620	4 m³/h	(by ABEL)
A1650	10 m³/h	(by Feige Filling)



Automated dosing system

Dosing station with segment scale (with suction)

A1400/01	30 – 1,000 kg; 200 m³/h	(by ABEL)
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5,25m level

Filling of small containers

A1660	max. 30 kg	(by Wipp)
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Production building A504

Other significant assets 1/2

13 Inline-Dissolver (Cavitron, 1.4541)

ZX1100	7 – 20 m ³ /h (8 bar)
ZX1200, 1201, 1202	7 – 18 m ³ /h (8 bar, T _{max} = 180°C)
ZX1300, 1600, 1610, 1620, 1630	7 – 18 m ³ /h (8 bar, T _{max} = 180°C)
ZX1605, 1615, 1629,	4 – 10 m ³ /h (8 bar, T _{max} = 180°C)
ZX1640	20 m ³ /h (8 bar, T _{max} = 180°C)

3 Dissolver for mobile containers

R-1660, 1661, 1662 Stationary agitator 150 – 1,400 resp. 570 – 3,000 U/min

3 Stirrer for mobile containers

R-1667, R-1668 (each mounted on the wall side) and R-1669 (Stationary stirrer)

Dispersing unit (A1515)

ZX1515 Dispersing machine (by *YSTRAL*) 500 – 6,000 kg/h 35 m³/h (6 bar)

Production building A504

Other significant assets 2/2

Pigging systems (1.4541)

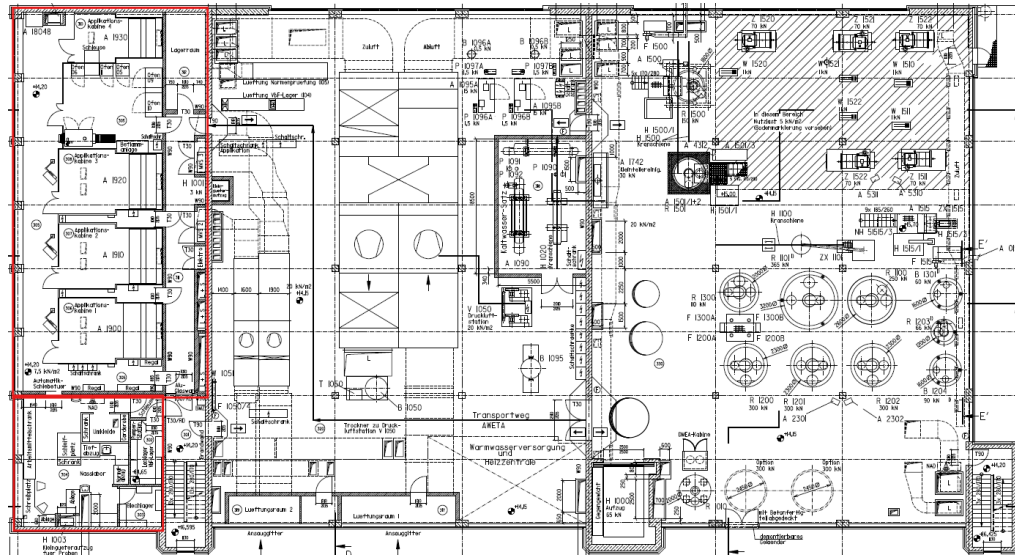
X900/1, X900/2, X908	Sending and catching station	(by <i>I.S.T. – Dorando</i>)
X901 + X902	Catching station	(by <i>IST – Dorando</i>)
X912	Sending and catching station	(by <i>I.S.T. Molchtechnik</i>)
X910	Head-end station	(by <i>Pfeiffer</i>)
X911	Removal station	

Elevators

H1000	Freight elevator, 6,500 kg, Ex-proof design
3 Mini elevators	Payload 300 kg

<u>Ventilation system</u>	Supply air (heatable) / Exhaust air
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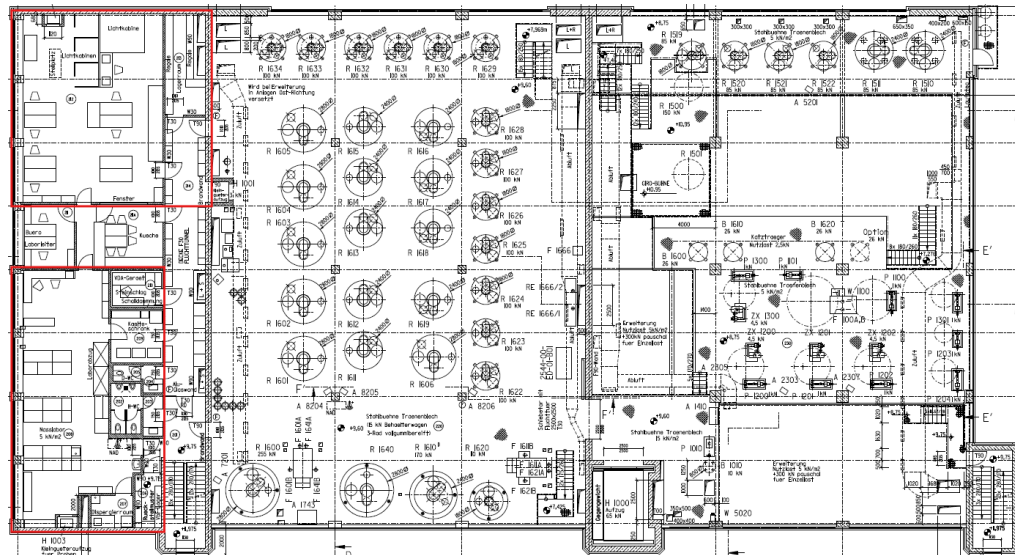
Lab areas



14m – level

Paint application ~ 150 m²

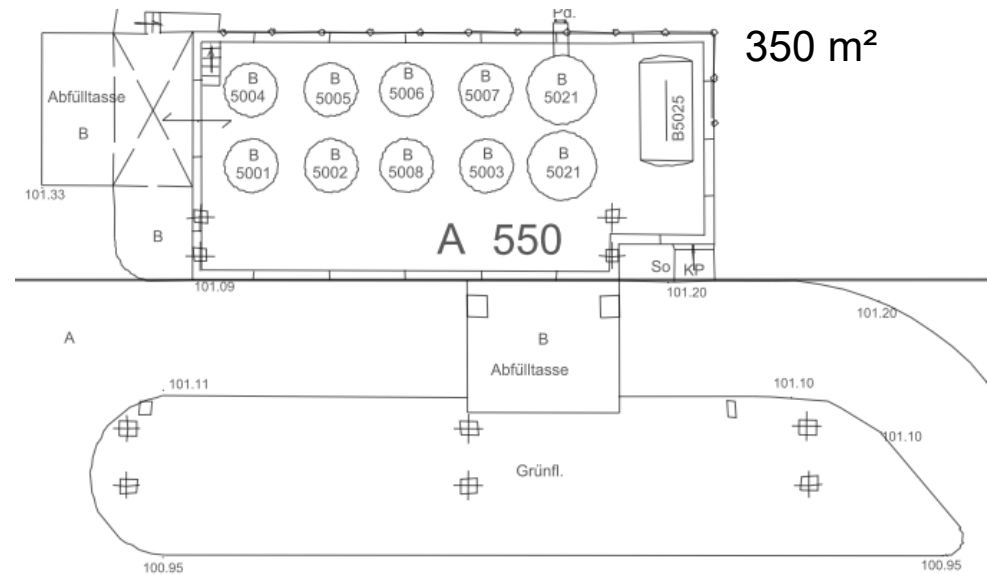
Lab section ~ 50 m²



9m – level

Lab section ~ 200 m²

Tank farm A550 with Tank truck / container unloading

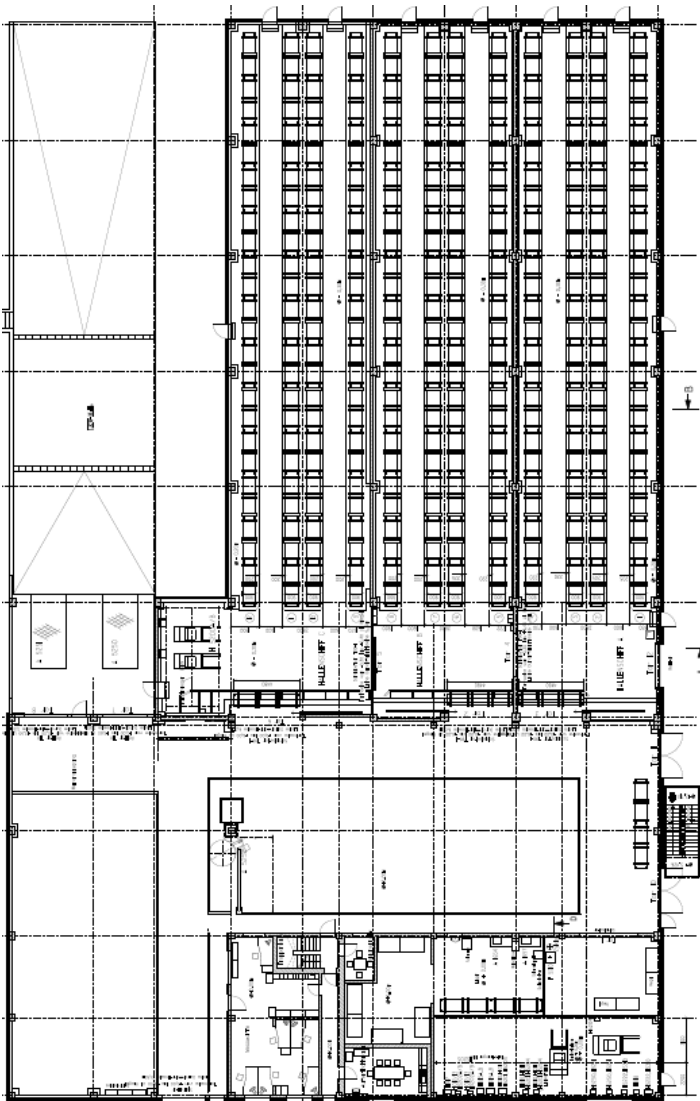


B5001 – 5008	8 Tanks (upright)	40 m³, 1.4541, heated (hot water)
B5021, B5022	2 Tanks (upright)	72 m³, 1.4541, heated (hot water)
B5025	1 Tank (horizontal)	16 m³, 1.4541, unheated, incl. UV disinfection unit
...540x	Washing solvent recycling facility (distillative), 1.4541 + 1.4408	

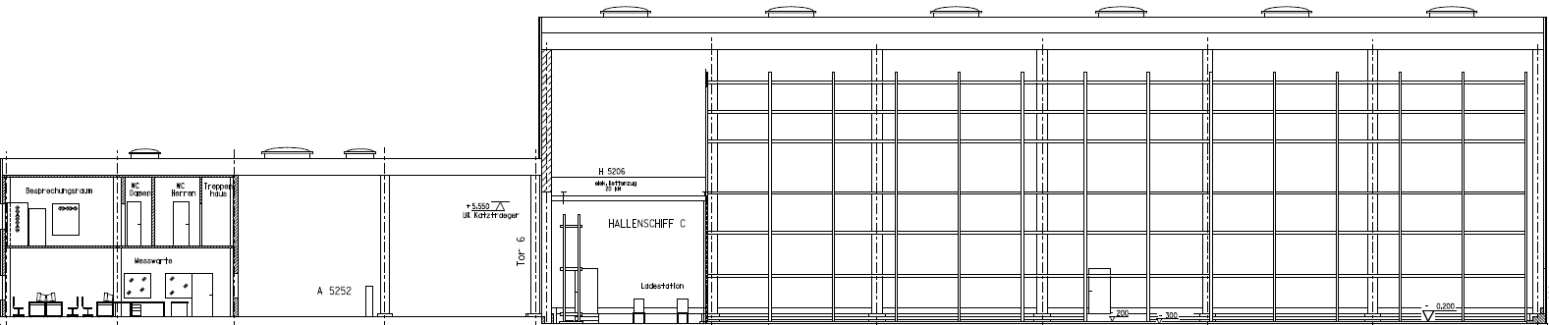
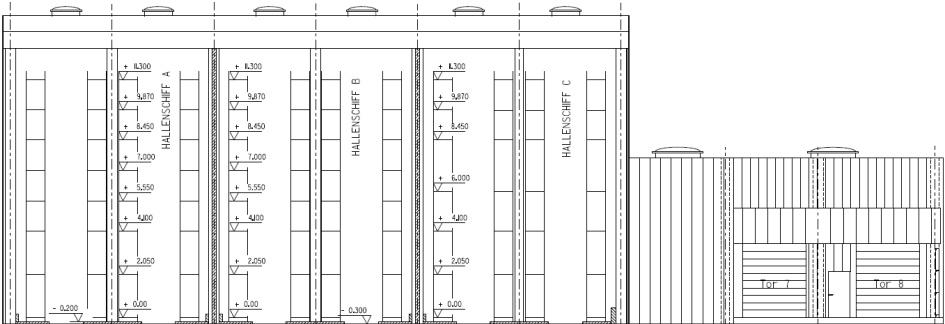
Circulation and feed pumps (all 1.4408)

P5001	Gear pume, 7 m³/h, 120 m	P5006	Centrifugal pump, 10 m³/h, 44 m
P5002	Gear pump, 7 m³/h, 120 m	P5007	Gear pump, 7 m³/h, 120 m
P5003	Gear pumpe, 9 m³/h, 140 m	P5008	Gear pump, 7 m³/h, 120 m
P5004	Centrifugal pump, 25 m³/h, 43 m	P5021	Gear pump, 7 m³/h, 120 m
P5005	Centrifugal pump, 20 m³/h, 34 m	P5022	Gear pump, 7 m³/h, 120 m
		P5025	Centrifugal pump, 42 m³/h, 43 m

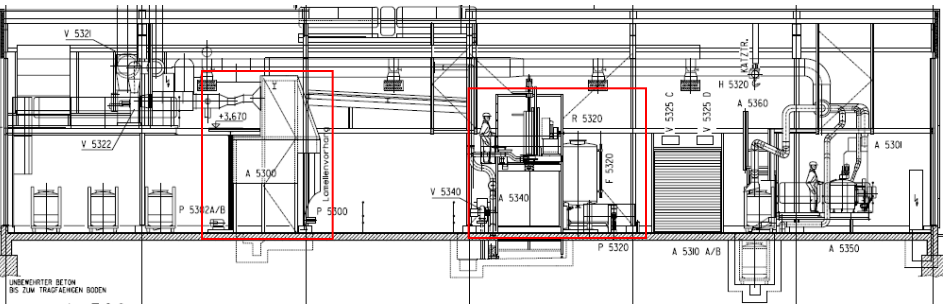
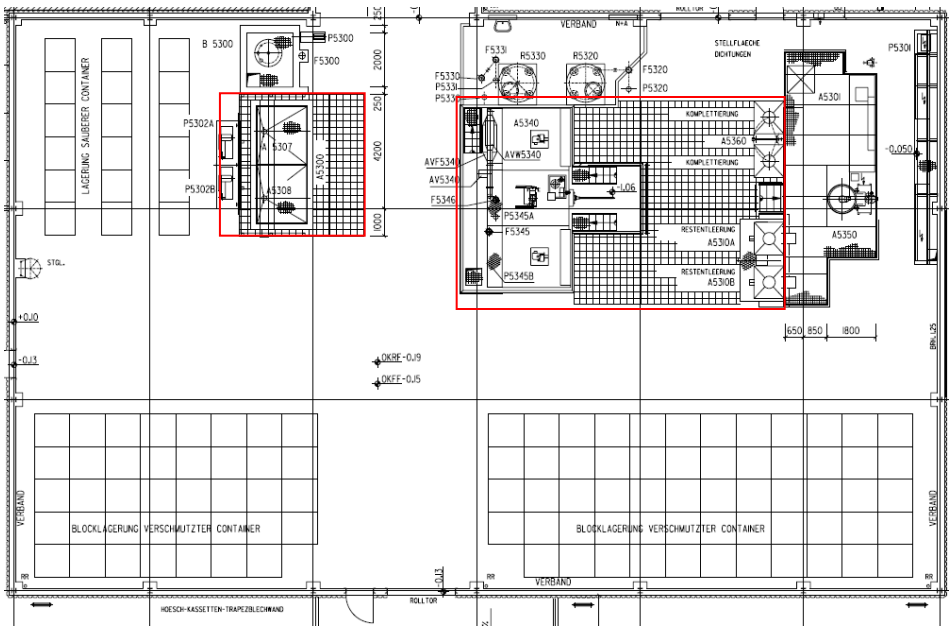
Warehouse building A501 (high-bay warehouse)



High-bay warehouse
Cargo handling area
Office and social rooms
2 Truck loading/unloading ramps



Building A508 (Container cleaning)



Cleaning plant for customer container (0.5 – 1 m³)

A5340 Automated cleaning unit (up to 6 pieces/h)

Cleaning unit for smaller packaging

A5300 Wash cabin

Further warehouses / functional buildings

A505 + A506

Storage of flammable substances ~ 42 + 49 m²

A501

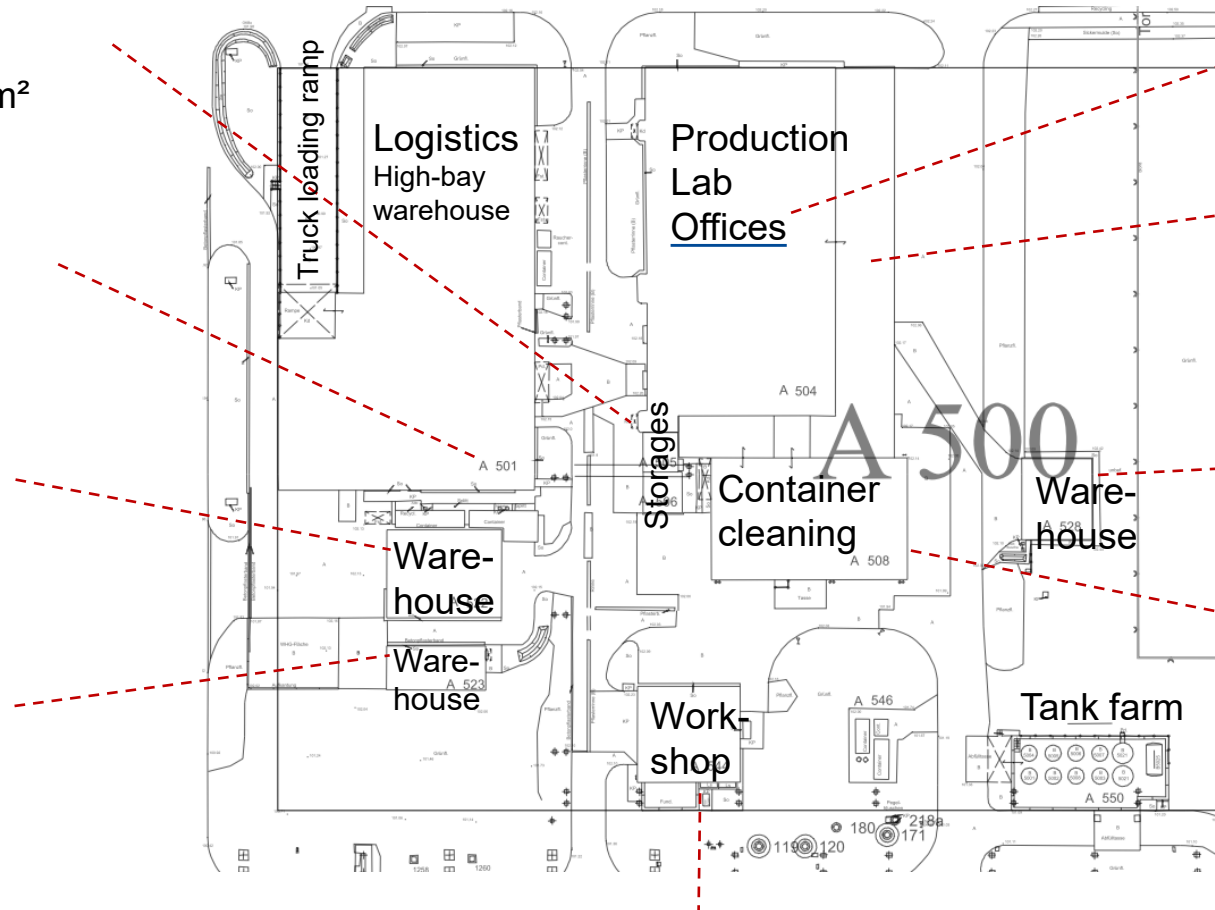
Battery charging station
~ 70 m²

A522

Warehouse ~ 300 m²

A523

Hazardous substances storage space ~ 130 m²
120 pallet spaces



A504

Office space ~ 250 m²
Social rooms ~ 300 m²

A504

Storage space ~ 500 m²

A528

Hazardous substances storage space ~ 170 m²

A508

Container cleaning
~ 700 m²

A544

Workshop ~ 300 m²