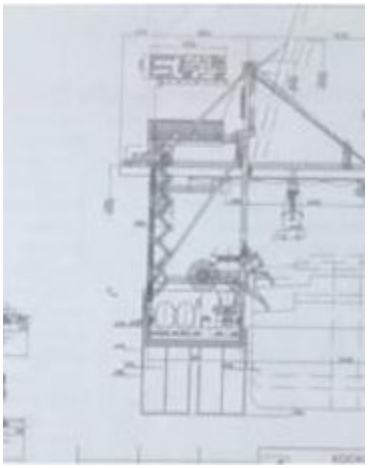
KOCKS KRANE RAW MATERIAL SHIPUNLOADER CRANE



Product Description

Kocks krane Raw Material shipunloader crane.

Kock Krane unloader is a shipunloader assembled in the area of the Marime Facilities plant. The machine is new because it never started service. The shipuloader had to be used to unload raw materials used by the Blast Furnace and Coke oven plant..

TECHNICAL FEATURES

Building year 2008 – 2011

Supplier Kocks Krane

TECHNICAL DATA

rail gauge 18,5 m

lenght over buffers 30 m

max. outreach from waterside rail (grab) 34 m

total outreach waterside rail 36,7 m

max. outreach from landside rail "- 2,0 m"

lifting height above rail to bottom closed grab 21 m ~

lifting height above rail to bottom open grab 19 m

total lifting range 40 m max.

total practical runway 350 m approx.

rail trolley high 31,3 m

unloader weight/ + counterweight 1040 t

trolley weight (without grab) approx. 71 t

clearance heigth under portal 7,2 m

maximun load per wheel in working condition max wind 615 (62,7 ton) kN

maximun load per wheel in rest condition, high wind 406 kN

total number of wheels 20 +12

Wire ropes

grab operating rope diameter (not installed) 38 mm

boom hoist rope diameter (not installed) 38 mm

Unloading capacity

lifting capacity on the ropes 45 t

maximum capacity (cream digging or peak digging) 2.000 t/h

rated capacity (free-digging) 1.800 t/h

practical average capacity 1.200 t/h

free-digging cycle 50 sec

unloaded material Raw materials

Handled material

iron ore pellets (bulk density) 1,9 – 2,2 t/m3

coal (bulk density) 0,8 – 0,9 t/m3

coal coke (bulk density) 0,5 – 0,65 t/m3

I.O. additives (bulk density) 2,0 – 2,6 t/m3

Grabs

grabs supply 3

grabs type scissor

max grab width 4.400 mm

grab volume 10,6 – 29,0 m3

grab dead weight 17,4 – 17,6 t

grab payload capacity 27,3 – 27,6 t

Receiving hopper

extract conveyor apron feeder

variable output 300 to 2.500 t/h

hopper opening level above top of rail 12 m

hopper opening 9 m x 9 m

hopper volume 110 m3

maximum weight of material in hopper 180 t

anti-wear hopper steel material Hardox 400

presence of dumping grid Yes

Operating speeds

hoisting and lowering with rated load speed 120/150 m/min

closing/opening with rated load speed 100/150 m/min

trolley traversing rated load/empty grab speed 180 m/min

lowered/raise boom hoist time 7 min approx. each direction

gantry drive travellling 25 m/min

operators traverse cabin travelling 20 m/min

grab slewing time (90 degrees) 20 sec

Accelerations

hoisting/lowering full grab 2,5 s

closing grab 2,1 s

hoisting/lowering empty grab 3,2 s

opening grab 3,2 s

trolley travel 6,0 s approx.

gantry travel against 50% OWL 3,0 s approx.

gantry travel against 100% OWL 4,2 s approx.

Wind

max operating wind speed 20 m/s

max travelling to locking point wind speed 27 m/s

max wind speed rail clamps design 35,8 m/s

max wind speed design 42 m/s

ambient conditions da -5 °C a + 40 °C

Crane classification

load 45 t

class U9

spectrum Q4

group A8

Mechanism classification

hoisting M8

trolley M8

boom M5

gantry travel M8

double independent lifting boom system Yes

drum brake Yes

Electrical data

feeding voltage 10 kV, 50 Hz, 3 ph

main drive motors 520 V, DC and 400 V, 50 Hz, 3ph

auxiliaries, static loads 400 V, 50 Hz, 3ph

lighting, auxiliary 230 V, 50 Hz, 1ph

control voltage 110 V, 50 Hz, 1ph

control voltage, PLC 24 V DC

Motors

hoisting 2 x 475 kW

trolley 4 x 50 kW

gantry 16 x kW

boom 1 x 120 kW