

Hotion mill rolls of rebars and profile
The good rolling stability and maximum rolling tonnage

HOTION



Keeping Mill Rolls

With the Best Working Performance on Your Rolling Mills

Introduction

Hotion dedicates to manufacturing and designing solutions on the mill rolls of rebars rolling line and profile rolling line. We have advanced production process and production equipments. All the products under the stand of ISO9001. Also, we have strict quality control to keep each mill rolls with best working performance on customers' rolling mills.

Hotion has two kinds of casting rolls process, static casting and centrifugal casting. Also, we could produce the main material of mill rolls such as: Spherical Graphite Pearlite, Spherical Graphite Acicular, Adamite, Alloy Indefinite Chill and High Speed Steel.

We would like to produce the mill rolls as per the request of customers. Meanwhile, we are also good at offering good solutions on mill rolls to solve customers' rolling questions.

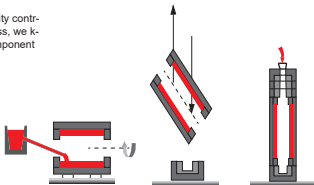
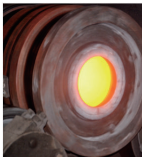




Casting Process

Hotion produces cast mill rolls with centrifugal casting process and static casting process. Static casting process is the traditional casting way to produce the mill rolls for all the material and the sizes. Centrifugal casting is the advanced technology applied on mill rolls' casting in recent years. With the rotation of centrifugal casting machinery, the molten steel will form a hollow tube. This hollow tube will be the working depth of mill rolls. Under the centrifugal force, the working depth will have good compactness, centrifugal casting will eliminate the segregation of tissue composition, and centrifugal casting will increase the tensile strength of mill rolls. Centrifugal casting mill roll is very popular by the customers around the world.

Hotion have strict quality control in the casting process, we keep best chemical component and best temperature.



Centrifugal Casting Process

Products

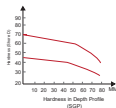
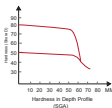
CENTRIFUGAL AND STATIC CASTING SPHERICAL GRAPHITE CAST IRON ROLL



The rolls are mainly used for roughing and intermediate stands of various types of continuous rolling mill, finishing stands of bar mill, section mill, finishing stands of strip mill.

GRADE	HARDNESS (HSD)	C	Si	Mn	Ni	Cr	Mo	Mg
SGP 1	50-55	2.9/3.4	1.2/1.8	0.4/1.0	0.5/1.0	0.3/0.6	0.2/0.6	≤0.04
SGP 2	50-70	2.9/3.4	1.2/1.8	0.4/1.0	1.0/3.0	0.2/1.2	0.3/0.6	≤0.04
SGA	60-80	2.9/3.4	1.2/1.8	0.4/1.0	3.0/4.5	0.2/1.2	0.8/1.0	≤0.04

Mechanical Properties	Centrifugal	Static
Hardness of shell	50-80 HSD	40-60 HSD
Hardness of core	35-55 HSD	35-48 HSD
Tensile strength of core	≥450MPa	≥420MPa



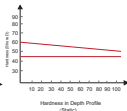
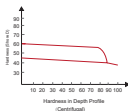
CENTRIFUGAL AND STATIC CASTING SPHERICAL GRAPHITE ACICULAR WITH NON CONTINUOUS CARBIDE



The rolls are mainly used for roughing stand of bar mill. The rolls have better wear resistance and heating crack resistance. The core of rolls have better strength with the spherical graphite.

GRADE	HARDNESS (HSD)	C	Si	Mn	Ni	Cr	Mo
SGAWNCC	45-60	3.0/3.4	1.5/2.5	0.8/1.0	2.5/4.5	≤0.2	0.7/1.0

Mechanical Properties	Centrifugal	Static
Hardness of shell	50-80 HSD	45-70 HSD
Hardness of core	35-48 HSD	35-55 HSD
Tensile strength of core	≥450MPa	≥300MPa



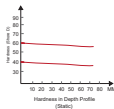
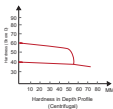
CENTRIFUGAL AND STATIC CASTING ADAMITE ROLL



The rolls are mainly used for the front finishing stands of section mill and hot strip mill, the roughing and intermediate stands of bar and wire mill. With the property between iron and steel mill rolls, this rolls could keep the hardness with a stable value along the working depth.

GRADE	HARDNESS (HSD)	C	Si	Mn	Ni	Cr	Mo
AD	40-60	1.3/2.3	0.30/0.6	0.6/1.2	≤0.2	0.8/1.6	0.2/1.6

Mechanical Properties	Centrifugal	Static
Hardness of shell	40-60 HSD	40-60 HSD
Hardness of core	35-50 HSD	40-55 HSD
Tensile strength of core	≥450MPa	≥420MPa



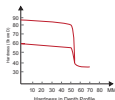
CENTRIFUGAL CASTING ALLOY INDEFINITE CHILL ROLLS



With the high content of alloy, centrifugal casting alloy indefinite chill rolls are mainly used for the finishing stands of continuous rolling mill of strip and bar, the pre-finishing stands of high speed wire, the intermediate and the front of finishing stands of small section, also utilized in thin plate and straightening roll.

GRADE	HARDNESS (HSD)	C	Si	Mn	Ni	Cr	Mo
Indefinite I	60-70	3.0/3.5	0.5/1.0	0.5/1.0	0.5/1.0	0.5/1.0	0.2/0.6
Indefinite II	62-72	3.0/3.5	0.5/1.0	0.5/1.0	1.0/2.0	0.5/1.0	0.2/0.6
Indefinite III	65-75	3.0/3.5	0.5/1.0	0.5/1.0	2.0/3.0	0.7/1.2	0.2/0.6
Indefinite IV	70-85	3.0/3.5	0.5/1.0	0.5/1.0	3.0/5.0	1.0/2.0	0.2/0.6

Mechanical Properties	Centrifugal
Hardness of shell	60-65 HSD
Hardness of core	35-48 HSD
Tensile strength of core	≥450MPa





CENTRIFUGAL CASTING HIGH SPEED STEEL ROLLS

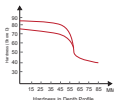


Centrifugal casting high speed steel, the rolls are widely used as the F5 and F6 work rolls for hot strip mills, the slitting stands and the finishing stands of bar mills. According to the property of HSS, rolls could be divided into many grades that will keep the HSS rolls have perfect working performance.

GRADE	C	Si	Mn	Cr	Mo	W	V	Nb
HSS	1.62.3	0.30.9	0.20.8	3.0/6.0	0.21/1.6	1.0/1.4	2.0/6.0	1.0/3.0

GRADE	HARDNESS (HSD)	FEATURE	APPLICATION
HSS I	80-90	Higher hardness, higher wear resistance	Finishing stand of strip, pre-finishing stand of wire mills
HSS II	75-83	Good toughness, good wear resistance	Pre-slitting stand of rebar mills and front stand
HSS III	80-88	Higher hardness, stable rolling performance	Last stand of rebar mills and front stand

Mechanical Properties	Centrifugal
Hardness of shell	75-85 HSD
Hardness of core	35-48 HSD
Tensile strength of core	1150MPa





Advanced Equipments and Production Process

Our plants equip whole facilities from iron smelting, casting, rough machining, heat treatment to finishing machining. Also, we have strict production process control to keep every step with best quality.





Quality Control

Chemical Composition Analysis

Dimension inspection after shake out

Tensile strength after rough machining

Ultrasonic after rough machining

Hardness inspection after rough machining, heat treatment, final machining

Micro-structure after heat treatment

Dimension inspection after final machining

Surface Roughness inspection



Packaging

Hotion suggests the packaging of iron shaft for the worldwide customers. It is better for transportation by sea. Also, we could offer the packaging of wooden case. If customers has special request for the packaging, we would like to pack mill rolls as their indication.

