



MCC
International

2017

WHO IS MCC INTERNATIONAL INC.?



ESW

www.esw.co.at

MCC International is a US affiliate of the Austrian based roll manufacturer ESW (Eisenwerk Sulzau-Werfen) that specializes in manufacturing high-grade centrifugally cast rolls for long product steel mills. ESW was founded in 1770 and has been owned by the same family since 1899.

MCC International was founded by Bill Miller in 1957 and has been in business for 60 years.

MCC

www.millercentrifugal.com



WHERE IS MCC LOCATED?

- Located in Western Pennsylvania
- 18 miles South of Pittsburgh
- The Town of Cecil:
 - Approximately 10,000 people (seven county greater Pittsburgh area has over 2.4 million people)
 - Pittsburgh area has strong technical and mechanical skills
 - Consists of 33 universities
 - Large manufacturing and service base
 - Formerly
 - Heavy steel making industry and coal mining area
 - During WW II produced more steel than the rest of the world combined



WHAT SETS MCC APART?

- Largest and broadest range of centrifugally cast rolling mill sleeves produced in North America
- Unique near-net-shape casting process
- In-house, modern CNC turning and milling machining centers and R&D lab
- State-of-the-art melting capabilities
- Prompt delivery and superior quality
- Continuous improvement and capital investment
- Complete sleeve/arbor assemblies



COMPANY VALUES

1. SAFETY

2. QUALITY

3. PRODUCTIVITY

4. COST REDUCTION



QUALITY



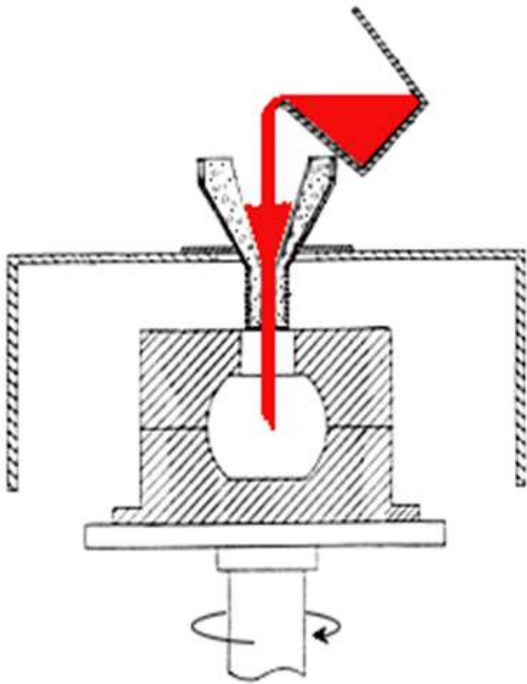
All processes – from making an offer to receiving an order, from purchase to dispatch and also attending to the needs of our clients on the spot – are regulated in the quality management system. Certification is the recognition of the implementation of the quality philosophy.



PRINCIPLES AND ADVANTAGES OF CENTRIFUGAL CASTING PROCESS

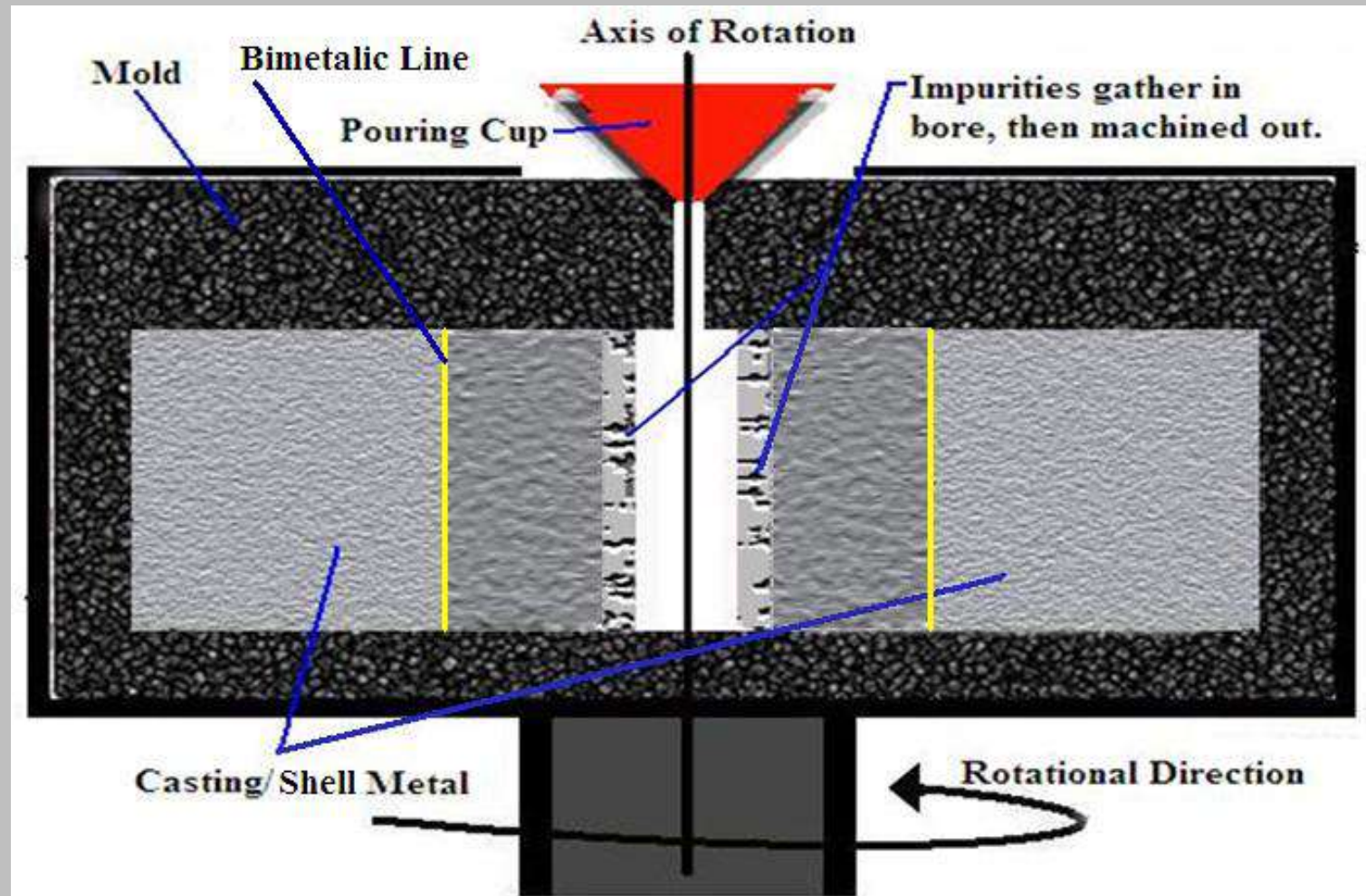
CENTRIFUGAL CASTING PROCESS

Vertical Centrifugal Casting



1. Castings are poured while the mold is spinning
2. For bi-metallic castings, the shell metal is poured;
-after a predetermined waiting time, core metal is poured
3. Shell metal solidifies quickly, producing a fine-grained structure
4. Impurities are forced to the center(bore) and later machined out

ADVANTAGES OF CENTRIFUGAL CASTING



PRINCIPLES AND ADVANTAGES OF CENTRIFUGAL CASTING PROCESS



ADVANTAGES OF CENTRIFUGAL CASTING

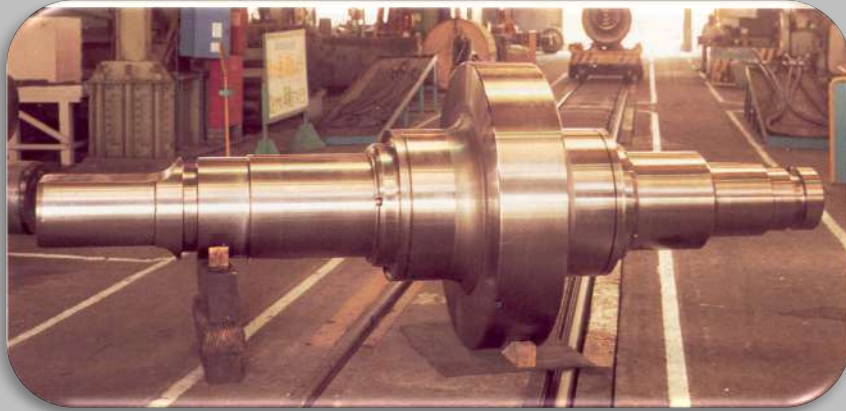
- Improved physical properties, casting is relatively free from defects
- Due to the G force, all the impurities and gases are forced to the bore of the casting, which will be machined out at a later stage
- Directional solidification is promoted in centrifugal casting
- A fine grain structure is produced
- Production rate and flexibility is high
- Faster delivery
- **LONGER PRODUCT LIFE**

NONFERROUS

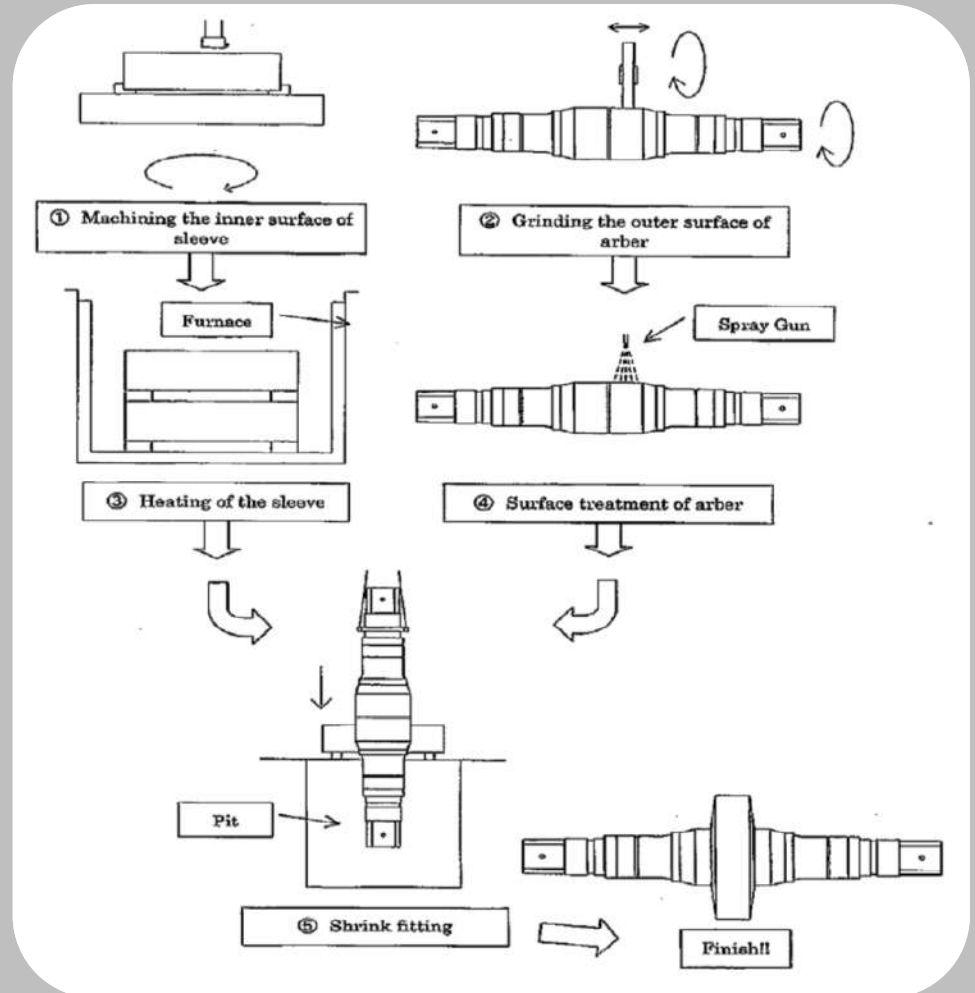


- MCC produces nonferrous gear blanks, bearings, bushings etc. from 6"(152mm) diameters up to 120"(3,048mm) diameters
- Materials: Gear Bronze, Manganese Bronze and Aluminum Bronze

SOLID ROLLS VS. RINGS/ARBORS



Solid beam mill rolls (monobloc steel) were made in the past but sleeving became the preferred method during the 1970's. The advantages are the ability to reuse the arbor multiple times. Therefore reducing cost, and the ability to use harder material on the exterior (working area) of the cast sleeve.



MCC SLEEVE BEING FITTED



Arbor being carefully lowered into pre-heated sleeve.

MCC PRODUCT LINES

SLEEVE APPLICATION

Structural Steel Mills

- Universal Roughers - Beams and Channels
- Universal Finishers - Beams and Channels
- Vertical Rolls
- Straightener Rolls

Bar Mills

- Cantilever Rolls
- Kocks Mill Rolls

Pipe Mills

- Stretch-Reducing Mill Rolls
- Mandrel Mill Rolls
- Extractor Rolls
- Sizing Mill Rolls

MCC PRODUCT LINES



Bi-metallic structural mill sleeve
(38-1/2" x 13")



Bi-metallic structural mill sleeve with hub
(38-1/2" x 13")

MCC PRODUCT LINES



Bi-metallic horizontal sleeve
(29" x 24")



Machined structural mill sleeve
(27-1/2" x 7")

MCC PRODUCT LINES



Machined cantilever sleeves

(25-1/2" and 15" O.D.)



SRM pipe mill sleeve

(9-3/4" x 4-3/8")

MCC PRODUCT LINES



Extractor rolls



Cantilever rolls



Small section horizontal sleeve



Large section horizontal sleeves

WHY YOU SHOULD CONSIDER MCC

Quality:

- Centrifugally cast outperform static cast rolls
- Centrifugally cast leads to better microstructure and wear shell material
- Fine grain bi-metallic structure (double poured) leads to better strength in core and more resistance to cracking and breakage
- Less impurities and porosity
- Improved material grades lead to rolling longer campaigns + less downtime
- Greater consistency and long term costs will decrease
- ISO certified → continuous positive feedback from existing customers

WHY YOU SHOULD CONSIDER MCC

Delivery:

- On time delivery
- Agile manufacturing → reliability
- Adjusting to customer needs
- Flexibility

WHY YOU SHOULD CONSIDER MCC

Service:

- Being a small company we are able to respond quickly to customer requirements / needs
- We are easy to work with
- Customer focused → working together with customer in order to solve their problems
- “One-Stop-Shop” for sleeve manufacturing, arbor manufacturing and complete sleeve/arbor assemblies

RECENT CASE PROOFING SUCCESS OF BETTER QUALITY

One of our customers “Gerdau” (medium section mill) was rolling 150x100mm beams. They usually got around 1400 tons before changing rolls due to verticals wearing out on size. Together with MCC they changed the roll grade and were able to achieve **2800 tons** before having to change rolls.

Result:

- MCC solved a specific wear problem for the customer by focusing in depth on an improving grade.
- Customer is very pleased due to less downtime and more tonnage being produced per campaign and less labor for roll changes.

CUSTOMER REFERENCE LIST

SECTION MILLS

ArcelorMittal – LaPlace
Attala Steel
Gerdau Ameristeel – Cartersville
Gerdau Ameristeel – Midlothian
Gerdau Ameristeel – Petersburg
Gerdau Ameristeel – MRM – Canada
Nucor Steel – Berkeley
Nucor Steel – TX
Nucor – Yamato Steel
Steel Dynamics Inc.
Steel of West Virginia
Siam Yamato-Thailand

Corpacam - Guatemala
Laiwu Steel – China
Tangshan - China
Xintai – China
Jinxi – China
Voest Alpine – Donawitz - Austria
British Steel-Scunthorpe - UK
ArcelorMittal Dabrowa - Poland
Dongkuk Steel – South Korea
British Steel-Teeside
British Steel-Hayange (France)
AHMSA-Mexico

CUSTOMER REFERENCE LIST

BAR MILLS

Cascade Steel

Charter Steel

CMC – TX

Gerdau Ameristeel – St Paul

Gerdau – Divinopolis – Brazil

Gerdau – Sao Paulo – Brazil

Gerdau – Acominas - Brazil

Nucor Steel – AL

Nucor Steel – IL

Nucor Steel – Marion

Nucor Steel – MS

Nucor Steel – NE

Nucor Steel – SC

Nucor Steel – UT

Nucor Steel – WA

SDI – Roanoke Bar Division

Sinobras – Brazil

Caparo - UK

NTS – Thailand

Carpenter – Latrobe Steel

CUSTOMER REFERENCE LIST

PIPE/TUBE MILLS

ArcelorMittal – Shelby
TMK IPSCO Koppel
Lakeside Steel – Canada
Michigan Seamless
USS Fairfield
USS Lone Star
USS Lorain Tubular
V&M Star
PTC Alliance
Benteler Tube

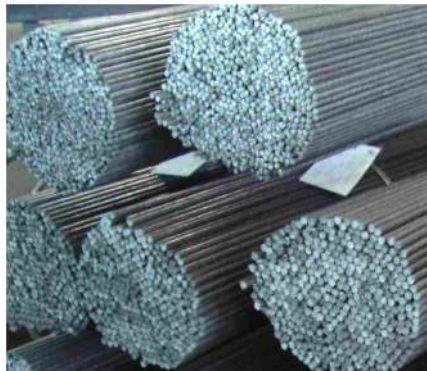
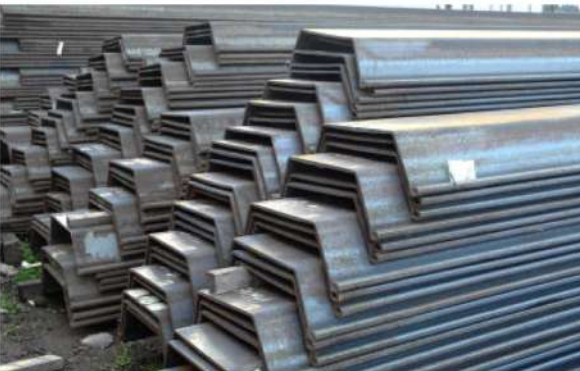
STRAIGHTENERS

Nucor –Yamato Steel
Steel Dynamics Inc
Steel of West Virginia

HOT STRIP MILL EDGERS

USS IRVIN

MCC PRODUCTS USED FOR ROLLING...



REASONS TO PARTNER WITH MCC

LOYAL AND MOTIVATED PEOPLE

+

SUPERIOR TECHNOLOGY

+

KNOWHOW

=

HIGH QUALITY PERFORMANCE

CONCLUSION

**Let MCC help you solve your
rolling mill problems**

Thank you

<http://www.millercentrifugal.com>

