

Nodular Iron Rolls

Hitachi Roll Material

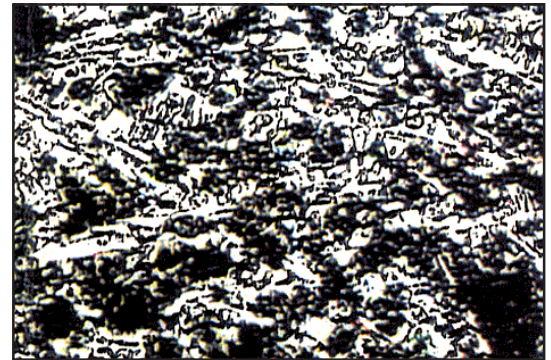
- Adamite Steel
- Cr Iron
- Cr Steel
- Definite Chilled Iron
- High Speed Steel
- Indefinite Chilled Iron
- Nodular Iron**
- Special Cast Steel



These static-cast ductile rolls are structurally characterized by nodular graphite. Nodular graphite gives these rolls great tensile strength, enabling them to withstand heavy loads. Ductile rolls are structurally made up of cementite, matrix, and nodular graphite.

Increasing roll hardness through the addition of Ni, Cr, etc., or minimizing cementite to increase heat resistance, allows a wide variety of rolls to be manufactured. Applications for nodular rolls include:

- 8SM** Blooming, section, wire rod and bar roughing.
- 8X** Section, strip and bar intermediate and finishing; wire rod roughing and intermediate rolling.
- 8A** Plate intermediate and finish rolling; wire rod and bar intermediate rolling.
- 8AM** Section, strip and bar
- & AC** finishing.

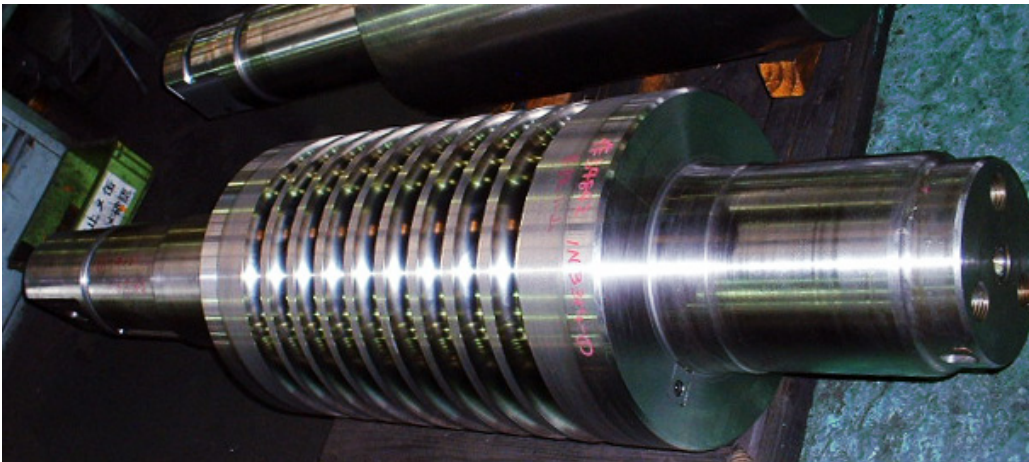
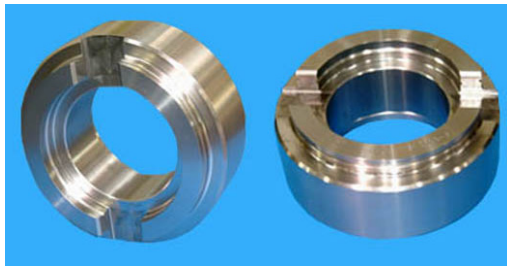
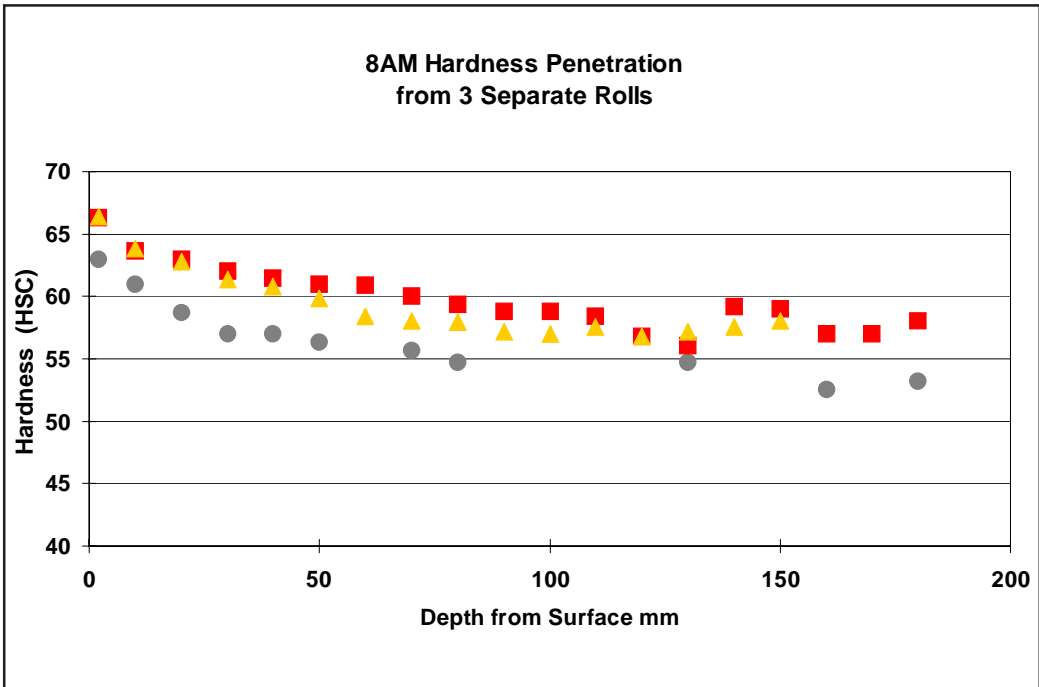


8AM Metal Structure

Nodular Iron Rolls	8SM	8X	8A	8AM	AC
Hardness (HSC)	40-55	50-60	60-65	65-70	70-75
Composition (% wt)					
Carbon (C)	3.2-3.6	3.2-3.6	3.2-3.6	3.2-3.6	3.2-3.6
Silica (Si)	1.6-2.4	1.8-2.4	1.3-1.8	1.3-1.8	1.6-2.4
Maganese (Mn)	0.2-0.6	0.4-0.6	0.4-0.6	0.4-0.6	0.4-0.6
Nickel (Ni)	1.3-2.5	0.8-1.8	2.0-2.8	2.0-2.8	2.5-3.5
Chromium (Cr)	<0.4	0.2-0.5	0.3-0.5	0.3-0.6	0.3-0.6
Molybdenum (Mo)	0.4-0.8	0.2-0.5	0.2-0.5	0.4-0.8	0.4-0.8

Chemical Composition and Hardness of Nodular Iron Rolls

ISO 9001, ISO 14000 Certified



Since 1915, Hitachi Metals, Ltd. has been a leading roll manufacturer. Through constant study and research, Hitachi has kept abreast of the demands and advances of the industry. Today, Hitachi is a full-line roll manufacturer, second to none in the world. With its innovative roll manufacturing techniques, Hitachi supplies all types of mill rolls to industries in all parts of the world, meeting the special demands of each industry.

This information does not constitute a warranty or guarantee.

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