

RMM

SHANGHAI DASONG
CORRUGATING ROLL CO.,LTD.



Corrugating roll specialist



Company profile

Shanghai Dasong Industry (Corrugating Roll) Co., Ltd. was founded in 1994 and now is located at the entrance of A5 Expressway in Songjiang District, Shanghai, China.

The rolls made from us are used not only in domestic cardboard enterprises, but far into international market since 2005. Now, Dasong possesses fixed assets of over RMB88 million, workshop area of 16,800 square meters and 240 employees, who can provide an annual production capability of 2,400 sets of corrugating rolls.



Office



Staff training

Our team

Human Resource is always Dasong's biggest treasure. Our employees consist of large quantity of talents who keep rather stable. Employees over ten years' service period can easily be found within us.

Milestone

- May 1994** Established in Songjiang Sijing Agricultural Machinery Plant.
- Aug 1998** Relocated to Sijing Economic Development Zone.
- Sep 2002** ISO9001:2000 Quality System certified.
- May 2003** "The First Tungsten Carbide Corrugating Roll of China" developed and produced.
- June 2004** Nanhai Dasong Roll Manufacturing Co., Ltd. established in Foshan, Guangdong Province
- Jan 2005** Relocated to the A5 Expressway Entrance in Zhangshi Industrial Development Zone
- Aug 2005** CMATLAB5.0, a set of design for flute profile optimization independently developed.
- July 2006** Technical problem of high-speed flute profile design and corrugating roll peripheral heating successfully tackled.



Technical discussion



Dynamic balance

Quality management

- Advantage I:** Excellent Quality Management Team: Dasong has established a perfect quality control chain consisting of 2 CQEs (Certified Quality Engineers) and 8 well-trained inspectors with work experience of over 6 years.
- Advantage II:** Advanced Quality Detecting Equipment: Dasong is equipped with flute profiler, dynamic balancer, coating thickness detector and infrared temperature detector, etc., which improves the efficiency of product quality control to a great extent.
- Advantage III:** Perfect Quality Control System: Dasong obtained ISO9001:2000 Quality System Certification in September 2002. Adhering to the TQM principle, we insist on constantly improving techniques to ensure high quality delivery.
- Advantage IV:** Strict Product Inspection System: Self-check, mutual-check and professional-check have been effectively used to prevent unqualified products from flowing to the next working procedure or even into the market.



Checking

Customer service

- Professional Service Team** — 4 senior engineers with 13 years' related experience, 6 technicians experienced in installation and adjustment.
- Perfect Service System** — clear work standard of service items, service procedure and problem solution on personal basis.
- Fast Response Mechanism** — response to customer by call in 1 hour, problem solution in 24 hours.

Before Sales: technical instruction, questions answer to the customer.

During sales: assistance in finding the suitable profile for the customer.

After sales: installation, debug and regular technical visit to the customer.



Raw material

▲ High Quality Raw Material

We select high quality steel alloy 48CrMoA from civil top special steel manufacturer, which is solid blocks with hollowing out as required by the stream chamber to ensure the quality delivery and long life of the corrugating rolls.

▶ Precision Equipment

Equipped with the most advanced civil CNC flute grinder with Siemens CNC programming system and Japan-based Nikkon calibration system that make sure the precision can be 0.01mm lower.

▼ Strict Production Flow

We have tested techniques and strict process control system. All rolls undergo multiple tests to ensure our products supplied in optimum condition.



CNC grinding machine



Hardening



Tempering

◀ Reliable Quenching

High quality raw material: the tunnel body is made of 48CrMoA fine forged steel and appears deep hardening thickness and good surface hardness.

Tested Techniques: the techniques are tested and stable owing to our last experience of over 2000 sets of corrugating rolls quenching.

Reliable Equipment: the intermediate frequency quenching equipment is run by civil biggest power (800KW), which ranges quenching hardness HRC58~63.



Finished product area



Reground roll area



Laths and grinding machine area

Powerful Producing Capacity

12 civil most advanced specialized CNC corrugating roll grinding machines and over 60 divers of producing equipment enable Dasong to achieve production or sale volume of 2400 sets of corrugating rolls, over 1800 pressure rolls, glue applicators and doctor rolls.



CNC grinding machine area



CNC milling machine

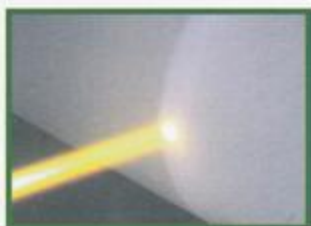
In January 2006, the first civil specialized CNC corrugating roll milling machine was tailored to cut the flute which not only avoids the defect of extra stress while being cut on the planing machine, but also improves the profile precision and lengthens the lifespan of the corrugating rolls.



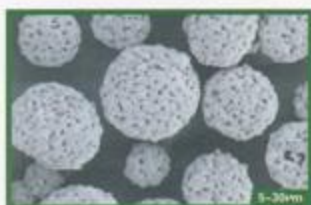
PLC control



Spray gun



Supersonic thermal spaying



Wc12Co agglomerated powder



Tungsten carbide coating



Tungsten carbide coated flute

Advantage of Dasong Tungsten Carbide Corrugating Roll

Advantage I : the most advanced equipment of tungsten carbide spray coating from US Paraxair.

Advantage II : top quality tungsten carbide agglomerated powder (cobalt contained; agglomerate $5\mu\text{m}$ ~ $30\mu\text{m}$, particle less than $2\mu\text{m}$).

Advantage III: perfect techniques after 4 years' experience make you use at ease.

Phase I : R&D (2002.05-2003.04)

In May 2002, a team was established to tackle technological problems of tungsten carbide corrugating roll project, including making up its market plan.

Phase II : Trial Production (2003.05-2004.01)

In May 2003, civil first set of tungsten carbide corrugating rolls were produced, which is still in good service in Shanghai Shenjiang Box Converters Plant.

In the following 18 months, through cooperation with related customers, Dasong began to conduct batch trial production as to gradually improve tungsten coating techniques.

Phase III : Market Promotion (2004.02-2006.01)

Centering in Shanghai, Dasong began to expand its market into the peripheral regions such as Jiangsu and Zhejiang province. Till now, in Yangtze River delta, more and more bigger box converters enterprises have adopted the tungsten carbide corrugating roll.

Phase IV : Product Mature/Total Market Promotion (2006.02-now)

With stable production techniques and high performance / price ratio, Dasong tungsten carbide corrugating rolls have gained widespread market recognition, meanwhile, Dasong was highly praised by its customers for its high quality service. In February 2006, Dasong promoted its tungsten carbide corrugating rolls nationwide via medias like Huayin Media Group and China Packaging Federation Association.

Advantage IV: Nearly 800 sets of tungsten carbide corrugating rolls being used by over 350 customers are the best proof of Dasong quality.

Advantage V: The brand, scale, technical capacity and promise of Dasong will provide you reliable guarantee.

The Time of Tungsten Carbide Corrugating Roll

Compared with traditional product with chrome plating:

Advantage I : Profit Adding Obviously--Save the Medial Paper 2-8%.

Owing to its extremely hardness and wear resistance, the flute profile can be designed lower T.U.R, which will save 2-8% medial paper to cut down the cost and gain more profit for you.

Advantage II : Life-span Greatly Extending--3-6 Times than that of Chrome Roll

Tungsten carbide is characteristic of high rigidity (only inferior to the diamond) and high wear resistance (far more than chrome). Both theoretical calculating and practical working prove that the life of the tungsten carbide roll is at least 3 times longer than that of chrome roll, even up to 6 times. It is reported by our customer that their tungsten carbide roll's life-span has attained 50-60 million linear meters.

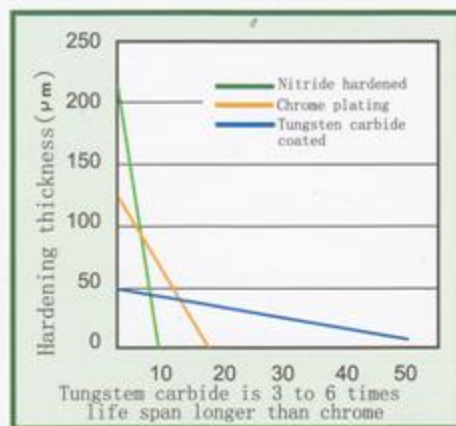
Advantage III: Improve the Board Quality--Stable Strength and Thickness

Through the profile being optimized and the flute being tungsten coated, the board gets strengthened and keeps longly stable. Without reducing the intensity and thickness any less, you can reduce the gsm of medial paper. Zero complains have come from our customers because there is no roll's middle concave and the thickness reduction of cardboard any more.

Advantage IV: Reduction of Cost

More Times to be repaired for corrugating roll. Reduce the frequency of repairing the corrugating rolls, reduce the glue use and related spare parts' wear (e.g. pressure roll). The times of corrugating roll can be repaired amount to 6 or 10.

Save money + Save trouble = High return

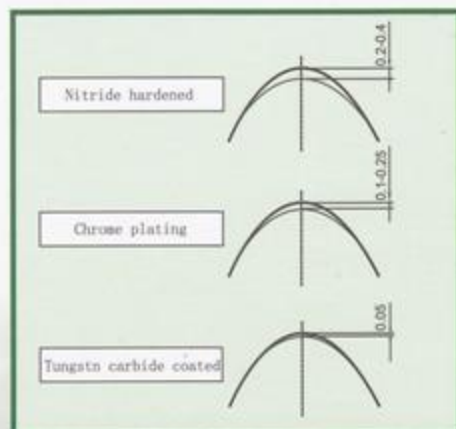


Life span comparing of three available corrugating roll

Tungsten carbide and chrome reference

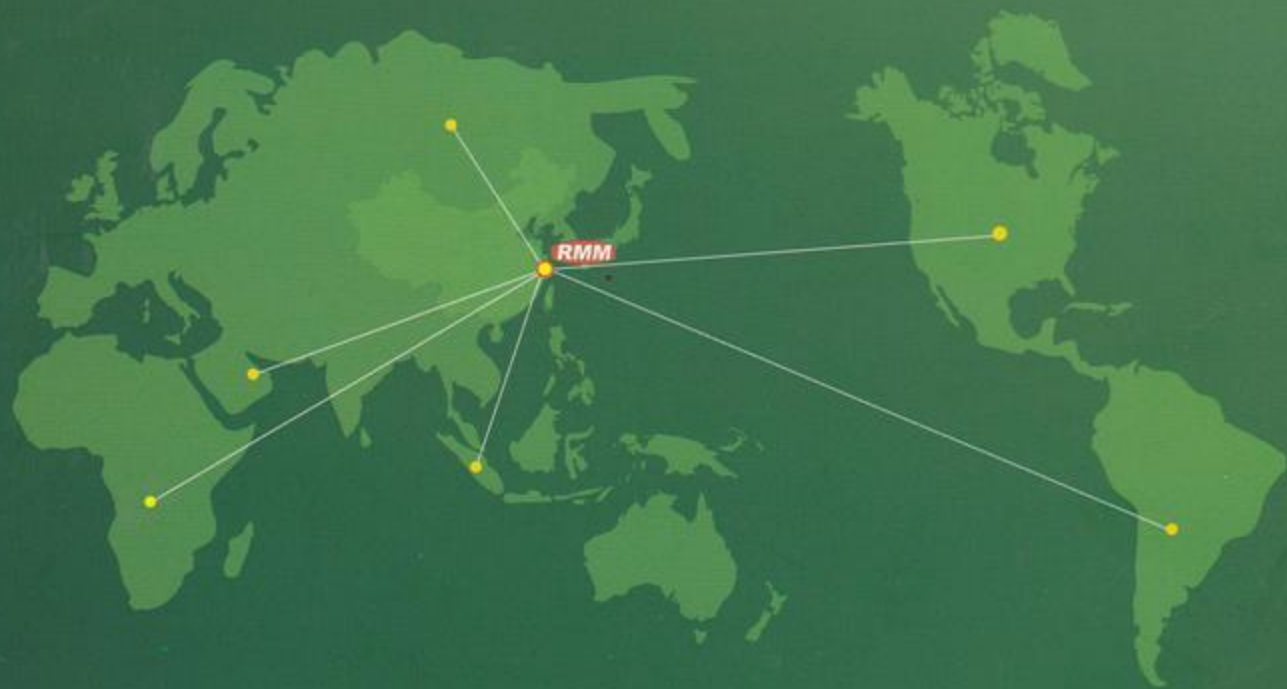
Surface treatment coating test	Hard chrome	Tungsten
Hardness (MHV)	800~1000	1100~1300
Wear test (Wear ratio g/cc)	1.0	0.2
Causticity test	Good	Excellent
Work temperature (°C)	430	540

Tungsten carbide and chrome reference



Flute edge comparing of three available corrugating roll

Our customers come from all over the world



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www.sh-rmm.com

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