

A Quick Reference List

1. Dashan Concentrator, Dexing Copper, JCC, China:
F.E. and D.E. rubber liners on $\Phi 10.37 \times 5.19\text{m}$ SAG mill

2. Dongguashan Concentrator, Tongling Copper, China
F.E. and D.E. rubber liners on $\Phi 8.5 \times 4\text{m}$ SAG mill
F.E. and D.E. rubber liners on $\Phi 5.03 \times 8.3\text{m}$ ball mill

3. CITIC Heavy Industrial Machinery Co., Ltd, China
Rubber liners on $\Phi 12.2 \times 11\text{m}$ ball mills (SINO Iron, Australia)
Rubber liners on $\Phi 5.5 \times 8.8\text{m}$ ball mills (CONCEICAO Iron, Vale, Brazil)
Rubber liners on $\Phi 7.9 \times 13.5\text{m}$ ball mill (SINO Iron, Australia)

4. Saindak Cu & Au Mine, MCC, in Pakistan
Rubber liners on $\Phi 5.03 \times 6.4\text{m}$ ball mills
Rubber liners on $\Phi 2.7 \times 4\text{m}$ ball mills

5. Dazhong Mining, Inner Mongolia, China
Rubber liners on $\Phi 2.7 \times 3.6\text{m}$ grate ball mills

6. Xinjiang Jinmai Int'l Logistics Co. (Tajikistan Mining)
F.E. and D.E. rubber liners on $\Phi 3.6 \times 4.5\text{m}$ ball mills
F.E. and D.E. rubber liners on $\Phi 3.6 \times 5.3\text{m}$ ball mills
Complete set of composite liners on $\Phi 5 \times 2.3\text{m}$ SAG mill

7. Fengning Xinyuan Mining, Hebei, China
Rubber liners on $\Phi 2.7 \times 3.6\text{m}$ ball mills
Rubber liners on $\Phi 3.6 \times 6\text{m}$ ball mills

8. Dahongshan Iron Mine, Yunnan, China:
F.E. and D.E. rubber liners on $\Phi 8.5 \times 4\text{m}$ SAG mill



D.E. rubber liners on $\Phi 10.37 \times 5.19\text{m}$ SAG mill



F.E. composite liners on $\Phi 10.37 \times 5.19\text{m}$ SAG mill



F.E. rubber liners on $\Phi 7.32 \times 10.68\text{m}$ Ball mill



F.E. rubber liners on $\Phi 8.5 \times 4\text{m}$ SAG mill



D.E. rubber grates on $\Phi 3.2 \times 4.5\text{m}$ ball mill

Part III Spares for Mills—Rubber Trommel Screen

Usage

Trommel screens have been getting popular around the world nowadays as classification equipment, associated with the features of simple structure, easy installation, reliable operation, and high efficiency. They are broadly applied at the discharge ends of AG mills, SAG mills and ball mills for classification of material. They are a success in mineral processing plants in non-ferrous metals mines.




















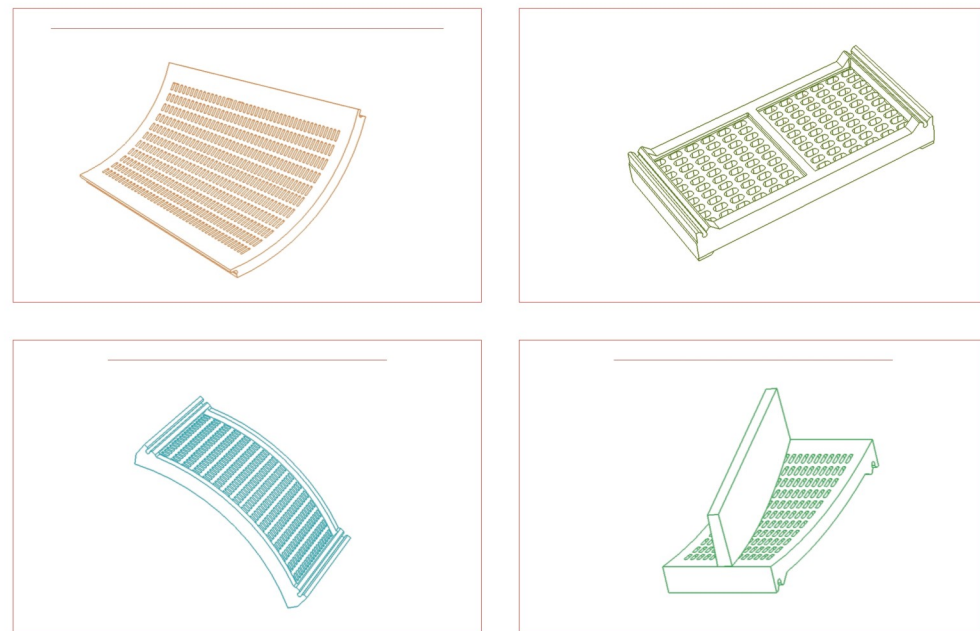
Features

Trommel screens manufactured by Naipu have combined characteristics of those trommels around the world with the technology uniquely developed by the Company, resulting in a product with features such as:

1. high screening efficiency, less blockage;
2. simple structure, less space demanded, easy installation and maintenance, no designated driver or power source needed.

shapes of holes in various sieves

						
staggered round holes	staggered hexagon holes	square holes	staggered square holes	rectangular holes staggered at bottom	rectangular holes staggered at sides	straightly-arranged rectangular holes
	mostly applied and accurate, suitable for screen-separating of regularly-shaped particles			when thicker screen wires are used, the precision rate drops due to high hole-opening rate and high throughput		
square holes			rectangular holes			it has the highest hole-opening rate, but has a poor precision rate, if used by shifting it by 90 degrees, the precision rate will be improved, owing to the long holes and the vibration of screen wires, blockage does not tend to occur
						
round	triangle	equilateral triangle	grizzly type	guide-track type	angled arrangement	loose rod arrangement
long service life, high precision, easy to be blocked; poor efficiency and low conveying capacity.	High precision, high efficiency, poor capacity in anti-blockage and conveying, and holes enlarged after wears.	Conveying capacity increases with the increasing of the height of rods, and the efficiency slightly drops when the rods become straight at both sides, and blockage gets worse.	Normally it is combined with a grizzly in order to protect the rods and reduce the wear.	It can be used on any horizontal screen so as to increase the conveying capacity.	It can be used on any horizontal screen so as to increase the conveying capacity.	It can reduce blockage, but has a poor precision rate.



Structure of Screen Panel

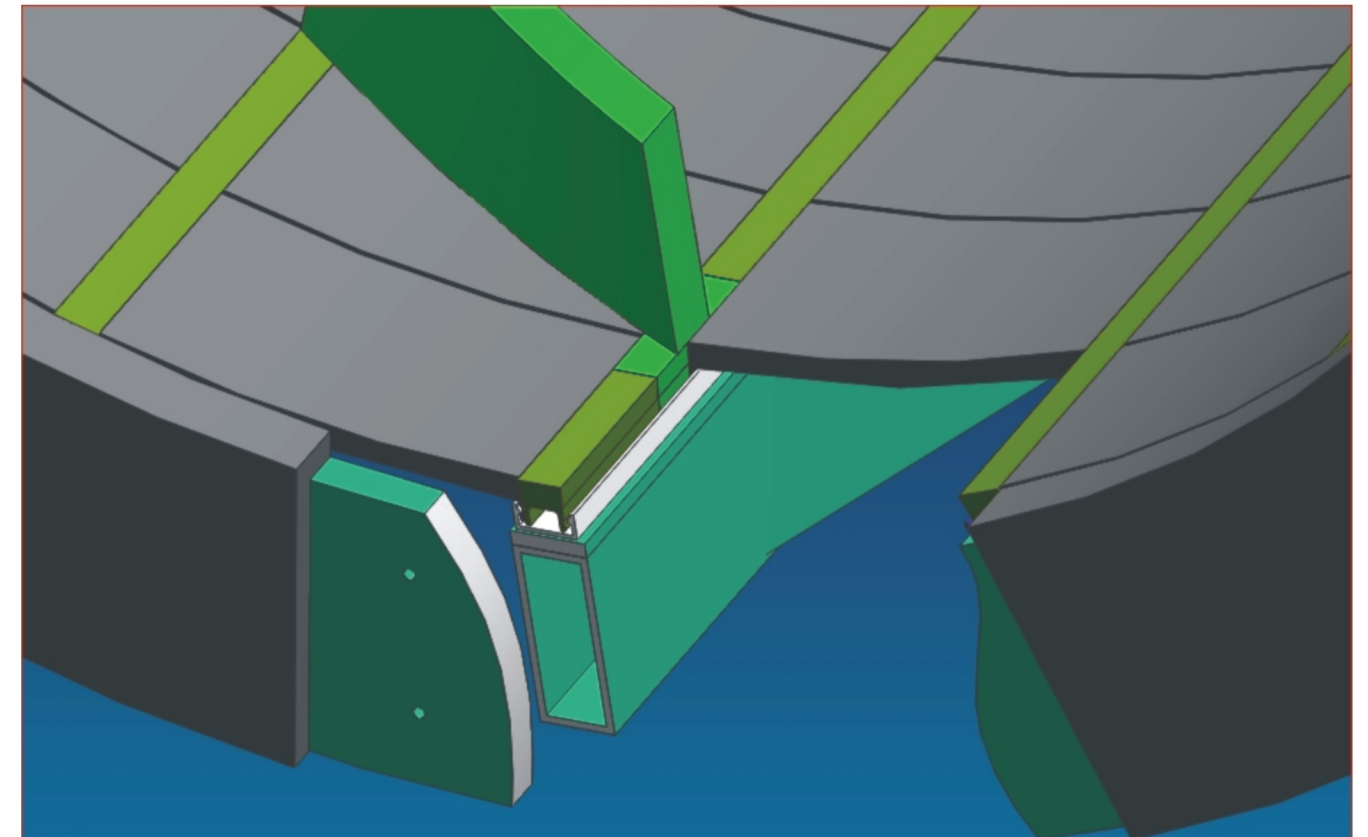


Illustration of Screen Panel Installation

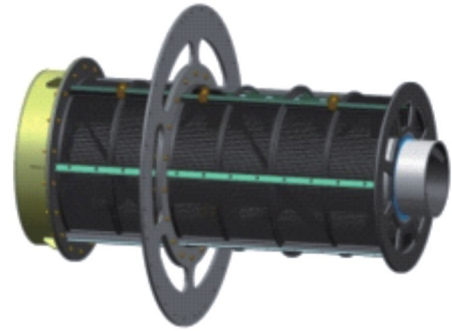
3. Trommel screen panels and bafflers are made of high abrasion resistant rubber or polyurethane. Different apertures and shapes can be made on the panels according to clients' requirements. Materials and designs are optional per customer's requirements, with their service life lasts one year or two.
4. Screen panels are inlaid. No bolts are used, making the installation and disassembling easy and reliable. Frame bars are stainless steel made, requiring no replacement for a long time. It is a structure with the least frequency of screen panel replacement around the world at present.
5. Low maintenance cost.

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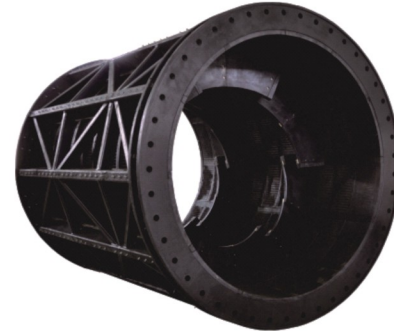
Model of Grinder	Specification of Trommel	Client
Ø7.9x13.6m ball mill	Ø 3500x3605 mm	SINO Iron, WA, Australia
Ø7.32x10.68m ball mill	Ø 3000x3940 mm	Dashan Concentrator, JCC, China
Ø5.5x8.8m ball mill	Ø 3000x3605 mm	Vargem Grande, Vale, Brazil
Ø7.32x12.5m ball mill	Ø 2300x3741 mm	TaiSteel, Taiyuan, China
Ø9.15x5.03m SAG mill	Ø 3000x3605 mm	Mt. Wulugetu Mining Co., China Gold Group, China
lØ8.5x4.0m SAG mill	Ø 2300x3741 mm	Dongguashan Concentrator, Tongling Copper, China

Form of Structure

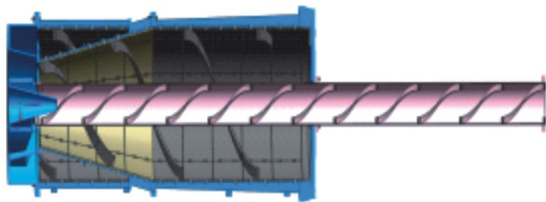
Rubber trommel screens consist of metal frames and rubber or polyurethane screen panels.
Naipu engineers rubber trommel screens with various structures suitable for ore dressing processing per clients' requirements.



Pre-classifying Reverse Spiral Trommel



Cylindrical Trommel



Double-deck Mass and Size Classifying Trommel



Outer Circulating Conical Trommel

Application Instruction

1. Cylindrical trommels and outer circulating conical trommels are mainly used for mass classifying, coarse particle separation and scats removal at mill discharge ends, so as to improve hydrocyclone's classification efficiency and pump's service life.
2. A Pre-classifying Reverse Spiral Trommel is used at grate mill or AG mill discharge end for discharge classification so as to control feed size into the mill in the second stage and to meet the metallurgical requirements.
3. A Mass and Size Classifying Trommel can both remove scats and control feed size into the mill in the next stage, with middlings returned for regrinding.

Data Sheet for Trommel-attached Mill:

Different operators have different process conditions, operating parameters and targeted figures for mineral processing, so they may require trommels with certain parameters. Naipu is professional and may find an optimal solution to meet a client's process conditions, operating parameters and throughput.

The client is to provide his operating parameters as follows regarding his grinding mill (for details refer to Data Sheet for Trommel-attached Mill).

Data Sheet for Trommel-attached Mill

Name of grinding mill			
RPM		Material passing rate(tph)	
Throughput(tph)		Material Bulk Density (t/m ³)	
Screening sizing(mm)		Ore hardness	
Slurry density (%)		Screen service life required by client(month)	
Mating Measurements: (Discharge Trunnion, Discharge Cone Assembly)			