



## APPLICATION - STEEL SHOT

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### MATERIAL CHARACTERISTICS

Steel shot is used in peening processes to improve the strength characteristics of metal structures. The shot is continuously propelled at very high velocities onto the surface of the component being treated. The duration and force of the shot peening is precisely controlled so that the desired performance characteristics are developed in the treated component.

### USER LIST (partial)

Advanced Material Processes  
Chengdu Aircraft  
Ervin Industries  
Fuji Heavy Industries  
General Metals  
Great Lakes Steel  
Metal Improvement Company  
National Peening Company  
Pangborn  
Peenamatic  
Quality Industries  
Ro-Mar  
Wilmington National Peening

### APPLICATION DATA

The shot's particle size is critical to operation of the peening system. There are S.A.E. specifications that define standard sizes and tolerances for cast steel shot. For a given size, a control screen through which all the shot must pass is specified. Additionally, upper and lower limits are set to ensure a tight particle size distribution.

ROTEX Screeners have a relatively flat gyratory-reciprocating motion that is ideal for producing the accurate separations required in this application. The low speed, long stroke imparts sufficient action to the mesh cleaning balls to keep the screen openings free from blinding.

Multiple deck ROTEX Screeners allow the sizing of various grades of shot without the need to change screens. Typical loadings are in the range of 1,000-3,000 PPH per square foot of screening area. Abrasion resistant linings are used for improved durability.

## ROTEX design features provide reliable, high efficiency performance

# ROTEX<sup>®</sup> SCREENERS

ROTEX Screeners are self-contained production screening machines for separating dry materials according to particle size. Through their unique gyratory motion of the near-horizontal screen surface, combined with a positive screen mesh cleaning system, ROTEX provides unusually high efficiency and capacity - all the result of continuing development for hundreds of applications throughout scores of industries.

ROTEX Screeners are made in over 100 standard models, ranging from 1 to 5 screen surfaces, for separations with openings from 1/2" to 325 mesh. They are available in Automatic-Tensioning all-metal and sanitary models, and General-Purpose models for applications not requiring all-metal construction.

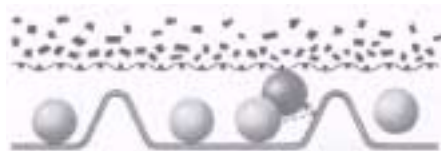
### ROTEX FLOW OF MATERIALS ... FAST, EFFICIENT, ACCURATE

Material enters at top where it is distributed over the entire width of the screen surface and conveyed toward the discharge end. Larger particles remain above the screen surface, while smaller particles pass through. Model shown (above right) is a typical two-surface ROTEX, which separates material into three different grades. Other ROTEX models have one to five screen surfaces, producing two to six separate grades,

### TWO SEPARATE SCREENING ACTIONS

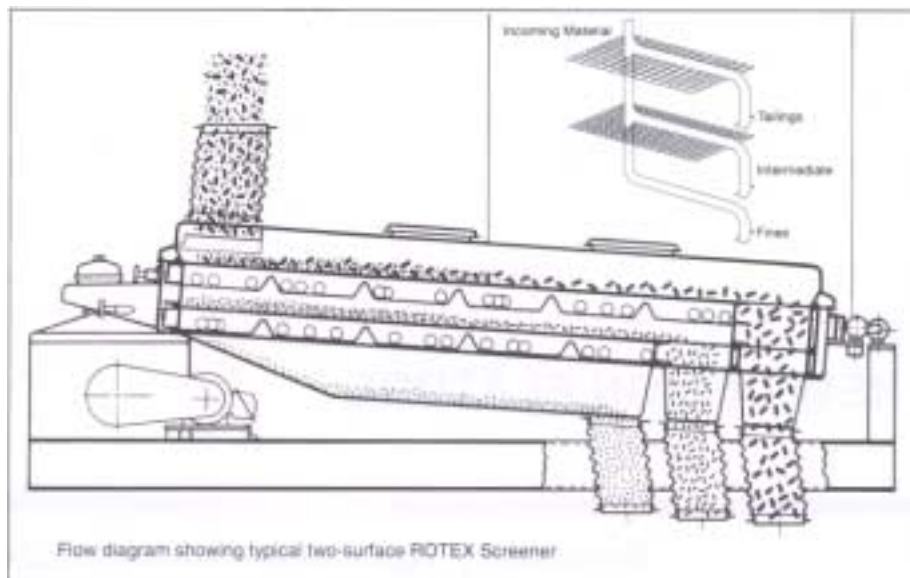
#### 1. Gyratory Motion rapidly distributes ... stratifies ... separates.

The unique gyratory motion of the near-level screen box distributes material rapidly over the screen surfaces with practically no vertical vibration or hop. Finer particles are quickly stratified and readily pass through the screen as larger particles are gently conveyed to the discharge end.



#### 2. Bouncing Balls control screen blinding

The bouncing action of balls confined in beveled pockets beneath each screen surface dislodges particles by direct contact. These resilient balls also keep the screen surface alive, providing agitation to aid particle stratification and to separate particles that may tend to stick together.



#### "QUICK-SNAP" PROVIDES AUTOMATIC SCREEN TENSIONING AND QUICK, EASY SCREEN REMOVAL

Quick-Snap is the patented design on all Automatic-Tensioning models for attaching screen clothing to the screen frame by spring tension clips. By maintaining a uniform tension across the entire screen surface, the system ensures superior screening accuracy, reduced screen blinding and increased screen life. The tension clip design also permits quick removal and replacement of screen clothing, which greatly reduces downtime.



#### SMOOTH COUNTERBALANCED DRIVE

The ROTEX counterbalanced drive produces a vibration-free screening motion that is never self-destructive - so smooth that ROTEX may be cable-suspended without loss of screening performance.

### VARIETY OF DESIGN OPTIONS

- Sanitary designs
- Special inlets and outlets
- Manual or pneumatic top cover clamps for positive seal
- Two-deck independently fed surfaces
- High temperature modifications
- Abrasion-resistant linings
- Floor mounting or cable suspension
- And many other options to suit the application

### MATERIAL TESTING SERVICE

Rotex takes the guesswork out of selecting the proper screening equipment by maintaining a fully-equipped materials testing laboratory. Here your materials are analyzed and tests conducted under simulated production conditions, to help determine the appropriate machine size, optimum screen openings and machine settings for a given application. To make use of this free testing service, first obtain a lab sample control number by contacting the ROTEX Test Lab Supervisor.

### CALL ROTEX FOR ASSISTANCE ON YOUR APPLICATION

ROTEX has specialized in process screening equipment for more than 80 years, leading the way with innovations that have become the standard of the industry. For assistance with your specific application, call your ROTEX Representative or Application Engineers in our Cincinnati office.

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