APPLICATION - METAL POWDERS

MATERIAL CHARACTERISTICS

Metal powders such as iron, steel, copper, tin, lead, zinc, nickel and aluminum are screened to provide sized material for a variety of end uses such as sintered metal parts, solder powders and rocket fuel ingredients. Bulk density varies from 70 PCF for aluminum to 260 PCF for iron powder.

USER LIST (partial)

Alcan Metal Powders
Alcoa
Alloy Metals Inc.
Alpha Metals Inc.
Cabot
Chemetals
Climax Molybdenum
Elkem Metals
Hoeganaes
Homogeneous Metals
Indium Corporation of America
Kennametal
Kobelco Metal Powders
Kobe Steel Ltd.
Praxair Specialty Powders
Quebec Metal Powders
Union Carbide

APPLICATION DATA

Metal powder screening often requires fine mesh separations in the 100 to 325 mesh range. Producers require very efficient screening performance to get maximum yield of the accurately sized fractions. For fine mesh separations, capacities are typically in the range of 50 to 100 PPH per square foot of screen area. Sealing is very important to prevent leakage and contamination between products. Because metal powders tend to blind fine mesh screens, a mesh cleaning system is critical to provide continuous screening performance. Constant tensioning of the wire screen is necessary to prevent stretching and sagging of the mesh.

ROTEX FEATURES

- Automatic tensioning screen attachment
- Horizontal gyratory motion for accurate separations
- Ball mesh cleaning
- Totally enclosed - positive sealing
- Fast access for screen changes
- Low headroom

ROTEX design features provide reliable, high efficiency performance

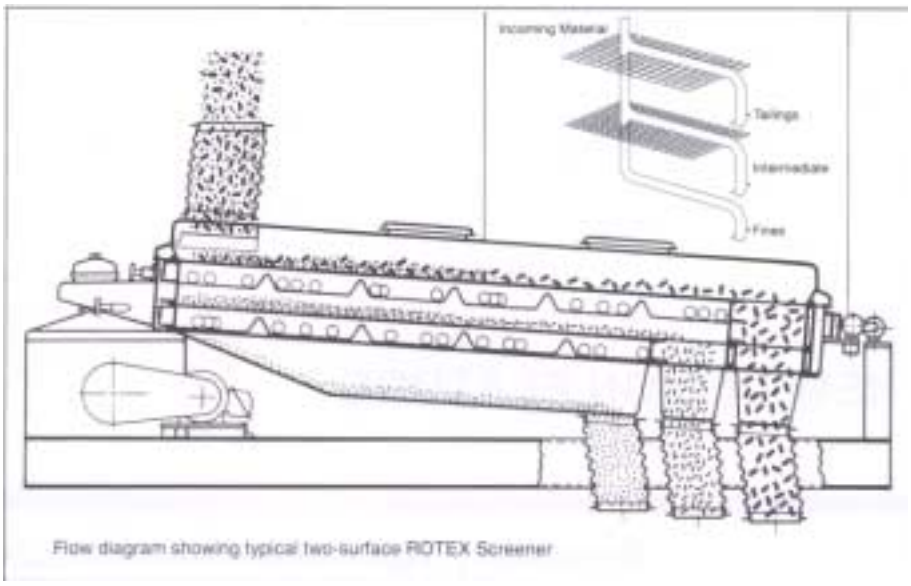
ROTEX SCREENERS

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 grace,

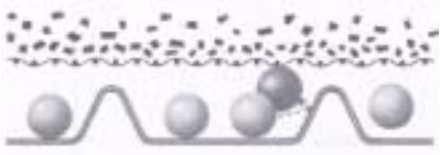


Flow diagram showing typical two-surface ROTEX Screener

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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