

Benefits of high frequency vibrating screen in gold processing plant

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Abstract

Vibrating screens are commonly positioned downstream of the cyclone overflow in order to clean the slurry and remove the trash prior to further gold ore treatment. The common issues associated with the vibrating screens currently available on the market are:

- Poor sealing between the screen moving frame and chute work.
- Blinding of the screen deck which leads to tedious screen cleaning requirements.
- Excessive structural vibration due to the use of low frequency, high amplitude screens.
- Heavy structural steel support to isolate the vibration.

The introduction of high frequency low amplitude vibrating screens such as those offered by Derrick and Sepro has resolved the majority of the issues stated above.

This paper will report on recent case studies where the use of high frequency low amplitude vibrating screens have increased dewatering effectiveness on fine material, eliminated blinding of the screen apertures, increased probability of coarse and fines separation; all contributing to higher screening efficiency. The smaller foot print of these screens has also facilitated better plant layouts in terms of maintenance activities. High frequency low amplitude excitation also means that support structure vibration issues are not as prevalent and light support structures are possible. Typically these screens are offered as a fully integrated system, which is easy to install and eliminates sealing issues.