PEEK VS METAL VALVE PLATES

PEEK is used as the standard valve plate material in most models of Blackmer's new 'HD' compressor line. PEEK (Poly Ether Ether Ketone) is an engineered non-metallic material with superior strength, toughness, and high temperature capability. While metal valve plates will continue to be available, PEEK offers some decidedly superior features in most applications.

Self Lubricating

The PEEK valve plate virtually eliminates metal-to-metal wear. This, and the self lubricating quality of PEEK help extend valve life, particularly in nonlube compressors like Blackmer's.

Lighter Weight

A PEEK valve plate doesn't impact the valve's seat and bumper nearly as hard as a heavier weight metal plate. Seat, bumper, and spring life are all extended.

Self Sealing

Almost all gas streams contain small solid particles that can become lodged between the valve plate and seat. Metal valve plates will loose their sealing ability under these conditions resulting in a loss of compression efficiency and extra temperature buildup. PEEK will maintain its seal and provide maximum compressor performance under less than ideal conditions.

Shatter Resistant

Foreign material in the valve or high impact forces can cause a brittle metal plate to shatter or break. PEEK has enough 'forgiveness' to virtually eliminate this problem.

Less Destructive

Metal bits and pieces from a broken valve that fall into the cylinder can wreck havoc with a compressor requiring very expensive repairs. PEEK valve plates are much less likely to break, but if they do the resultant damage will also be much less.

Less Expensive Valve Repair

Typically, repairing a worn valve involves remachining the seat and replacing the plate and springs. Repairing a valve with PEEK plates will normally require only the replacement of the plate and springs.

Corrosion Resistant

PEEK is resistant to almost all gasses typically handled by Blackmer compressors. A variety of metal plate materials would be needed to match the corrosion resistant range provided by PEEK.