ABSTRACT

SYSTEMS AND METHODS FOR COMPRESSING AIR

A system for compressing air includes: a variable speed driver having a drive shaft; at least one pre-main air compressor having at least one stage and adapted to receive and compress a flow of ambient or other air and to be driven by the drive shaft of the variable speed driver; at least one main air compressor having at least one stage on a first pinion shaft and adapted to receive and further compress a flow of compressed air transmitted from the at least one pre-main air compressor; at least one booster air compressor having at least one stage on a second pinion shaft and adapted to receive and further compress a flow of further compressed air transmitted from the at least one main air compressor; and another driver adapted to drive at least one of the first pinion shaft and the second pinion shaft through at least one transmission.

FIG. 7