

Airless Machines for Peening of Coil Springs

MECSHOT, a well-known name for more than 32 years in the field of surface preparation machines, has set new trends by manufacturing custom-built shot blasting and shot peening machines—both air-operated and airless machines. MecShot machines are not only cost competitive but also have low operative cost.

Springs, which are used in rail or automotive industry, are constantly exposed to torsion and compressive loading which causes material fatigue and consequently breakage. To prevent this failure, shot peening is a well-established process that ensures higher strength of the material and prolongs its service life. Research shows that springs subjected to shot peening increases the life of springs up to 10 times.

MecShot has designed and developed a wheel blast machine for shot peening of coil springs used in railway coaches and wagons. Coil springs loaded on revolving rollers are fed into the blasting chamber from one end through a roller conveyor system. After peening, they are unloaded from the other end. The blasting chamber is provided with protective replaceable wear-resistant Mn liners. A set of wheels propel the shot in controlled quantity by the MagnaValve and the surface of revolving springs are peened evenly. Shots are collected and transferred to a shot classifier which supplies even-sized shots for peening. The generated dust is sucked into a dust collector, leaving clean air in the atmosphere and making the environment pollution free.

MecShot has also designed and developed an airless wheel blast machine for stress peening of coil springs to increase fatigue life. Coil springs are mounted between conical fixtures and are hydraulically compressed through a certain level to induce stress. The job is mounted on an indexing table which rotates and revolves through an electro-mechanical drive. Two turbines fire the shots on the compressed spring with a high velocity. An AC drive is provided to control speed of the turbine and satellite. The coil springs are placed manually on the indexing table and potential meters indicate the quantum of spring compression. The machine is fitted with a dust collector for effective suction and a rotary screen separator for the supply of uniformly sized abrasive. ●



Airless wheel blast machine for the shot peening of coil springs



Stress peening machine

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