Manual Steering Gear for High Power Column-Type Electric Power Steering Systems

To cope with recent environmental problems, electric power steering (EPS) systems have been increasingly adopted and also, for vehicles requiring high power output, column-type electric power steering (C-EPS) systems have been widely adopted.

Here introduces a newly developed and commercialized manual steering gear (MS Gear) for high power C-EPS systems.

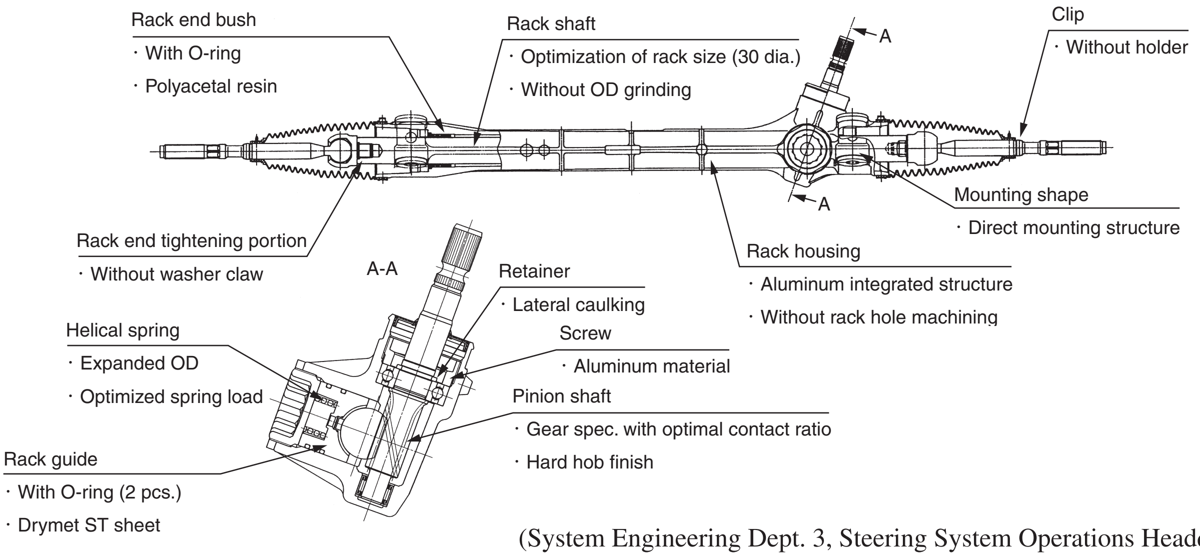
Target

MS Gear having performance of high strength, high reliability, and quietness with appropriate weight and cost applicable for C-EPS systems with the highest power in the world (Rack output force: 10 650 N)

Features

Aim of development	Items
Improvement in reliability and quietness	Rack guide with O-ring, rack end bush with O-ring, drymet ST sheet, helical spring with expanded OD
Improved performance	Direct mounting structure, gear spec. with optimal contact ratio, pinion with hard hob finish
Small size, light weight	Optimization of rack size, aluminum screw, aluminum integrated housing
Cost reduction	Optimization of rack size, without washer claw, rack shaft without OD-grinding, without clip holder
Materials free from environmental burden	Free from hexavalent chromium (zinc plating, dacrotized process)

Structure



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