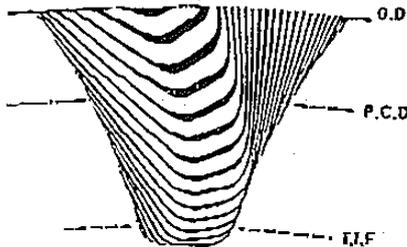
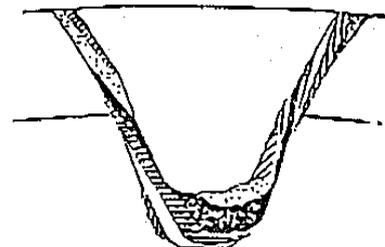


High speed shaping cut - Large circumference feed -

Conventional feed



Large circumference feed



Cutting load is concentrated at cutter tooth tip.
The cutter flank wear at trailing side tends to increase due to thinner longer chips.

The chips are generated thicker than Conventional feed.

<Part dimensions>

Module 2.25 NT27
Helix angle 31.5
Width 15mm
Material SCM415

<Cutter dimensions>

NT57
Material MAC-B(HSS)
With PVD COAT

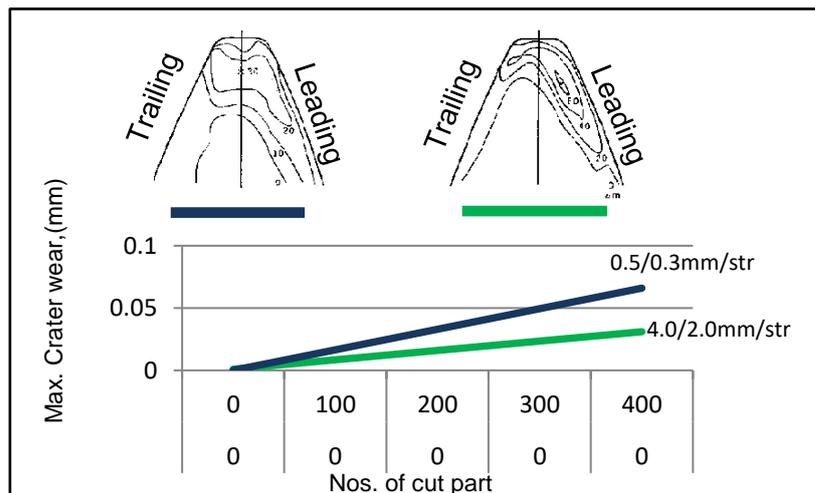
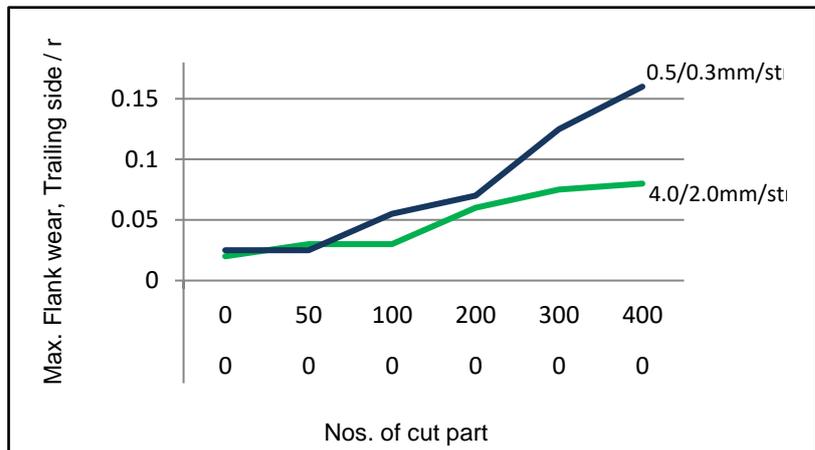
<Cutting conditions>

Stroke 800/1200/min
Radial feed 0.02/0.01mm/str

Circumference feed

— 0.5 / 0.3 mm/str (Time 90s)
— 4.0 / 2.0 mm/str (Time 35s)

As graphs are shown, both flank wear and crater wear with the larger circumference feed are smaller than the ones with smaller feed.



NOTE: In case of which shaping is the final process for gears and the cutting surface roughness doesn't meet the accuracy, the feed rate should be smaller. For those which final process is shaving or grinding, the surface roughness is usually out of scope on the shaping process.

NIDEC MACHINE TOOL CORPORATION