

Troubles and solutions in broaching operation

Trouble	Cause	Solution
<i>The broach stops during cutting</i>	<i>Power shortage of broaching machine</i>	<i>Use broaching machine with enough power</i>
	<i>Increase of cutting resistance due to adhesion, tooth chip, and abnormal wear.</i>	<i>Remove adhesion, a tooth chip, and abnormal wear by regrinding. Change cutting oil.</i>
	<i>Deterioration of machinability because of quality change of work material</i>	<i>Check the composition, the structure, and the hardness of work material. Change cutting oil</i>
	<i>Chip stuck</i>	<i>Whether the workpiece of a specified cutting length or more is processed is checked, chip is completely removed</i>
<i>Generation of chattering vibration</i>	<i>Number of cutting teeth being too small, that can work simultaneously</i>	<i>Check whether the cutting length is not longer than it should be. Remove chip completely.</i>
	<i>Spring back phenomenon of workpiece</i>	<i>The wall thickness of the workpiece should be thickened</i>
	<i>Resonance due to pitch and cutting length</i>	<i>Support the rear end or modify the project of broach.</i>
	<i>Rigidity shortage of machine and clamping device</i>	<i>Repair the machine and modify the clamping device.</i>
<i>Tear of side face</i>	<i>Adhesion on the cutting edge side face</i>	<i>Remove the adhesion part by regrinding. Change cutting oil</i>
<i>A big burr generates</i>	<i>Deterioration of machinability because of quality change of work material</i>	<i>Check the composition, the structure, and the hardness of work material. Change cutting oil</i>
	<i>Deterioration of sharpness</i>	<i>Regrind to improve sharpness</i>
<i>Tear of contour</i>	<i>Due to wear of the tip of cutting edge, finishing surface wears off</i>	<i>Regrind to improve sharpness</i>
	<i>Adhesion on the cutting edge</i>	<i>Remove the adhesion part is excluded by regrinding. Change cutting oil.</i>
	<i>Chipping the cutting edge is caused on</i>	<i>Remove chipping part by regrinding.</i>
	<i>Scratch on the cutting edge</i>	<i>Remove the scratch by regrinding</i>
	<i>Chip and the work piece processing surface rub each other</i>	<i>Regrind to improve sharpness. Remove chip completely. Change cutting oil</i>

<i>Thread streak</i>	<i>Chipping is caused on cutting edge chipping</i>	<i>Remove chipping part by regrinding</i>
	<i>Scratch on the cutting edge</i>	<i>Remove the scratch by regrinding</i>
	<i>Adhesion on the cutting edge</i>	<i>Remove the adhesion part by regrinding. Change cutting oil</i>
<i>Breakage and tooth lack</i>	<i>Broach installation is not good</i>	<i>Improve the installation</i>
	<i>Chip stuck</i>	<i>Check whether the cutting length is lot longer than it should be. Remove chip completely Change cutting oil</i>
<i>The go gauge does not enter</i>	<i>Eccentric of processing hole</i>	<i>Remove chipping part and scratches on the broach cutting edge if there is any. The standard surface and prepared hole should be correctly processed</i>
	<i>The corner part of the cutting edge wears out abnormally</i>	<i>Regrinding to remove the wear part</i>
	<i>The finish size is smaller than the allowance lower bound</i>	<i>Regrinding to improve sharpness. The wall thickness of the workpiece should be enlarged.</i>
<i>The no gauge passes</i>	<i>Large burr when the tooth face is ground</i>	<i>Remove burr from the cutting edge.</i>