

Issues during drilling

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Typical issues and the outline during drilling are mentioned as follows;

<i>Issue</i>	<i>Outline</i>
(Through hole) Roughness	The larger roughness leads to non-uniform plating adhesion to hole wall. Subsequently, it causes blow holes and barrel cracks. It may also give more risk of lower insulation resistance by penetration of plating solution to hole wall.
Resin smear	Melted resin by heat during drilling sticks to holes, which is resin smear. It causes non-sticking of plating to wall on this area(resin smear) and leads to conductivity failure between inner layer circuit and hole wall. Resin smear is typically removed by using chemical solution.
Burr	Burr is mostly seen both on the top surface of highest stacked of printed circuit board and on the bottom surface of lowest stacked of printed circuit board through drilling multiple stacked printed circuit board.
Nail head	Exposed copper of inner layers on through holes formed the shape of nail heading during drilling. Such a huge burden to hole brings non-uniform surface of through holes and may cause conductivity failure of plating.
Positioning accuracy failure	Positioning accuracy is defined as positioning shift distance of drill hole.