VKS

VKS TECH

Industrial Knowledge for Packaging Pros

SHOP FLOOR CARD

Doc: VKS-MET-PIN-01 | Rev: 01
Print & Laminate

PINHOLES DEFECT — ACTION CARD

Barrier-Failure Prevention Plan | Pinholes ठीक करने की Action Plan

⏱ Total Time: ~8 min | 🧹 45% = Dirty Rollers | 🏭 For: Met-1 / Met-2

🎯 THE 4-STEP ACTION PLAN | 4-Step कार्य योजना

1 — CONFIRM
Count holes/m²
Check pattern
1 min

2 — CONTAMINATION
Rollers, shields, unwind roll
⚡ 80% HERE

3 — BOAT SPLASH
Age, wire quality, feed rate
2 min

4 — VERIFY
Fresh sample, lightbox recount
2 min

📊 TOP 5 CAUSES RANKED | Top 5 कारण

#	Cause	Freq	Action
1	Dirty guide rollers	45%	IPA clean
2	Boat spitting (age/feed)	20%	Check age/rate
3	Shield deposit flaking	15%	Clean/replace
4	Unwind roll contamination	12%	Roll quality check
5	Static pickup	8%	Anti-static service

🌳 QUICK DECISION TREE | जल्दी निर्णय

Pinhole pattern? → Diagnose first

- **Random dots?** → Dust/particles
- **One area cluster?** → Specific roller/shield
- **MD streaks?** → Static charge
- **Edge only?** → Local contamination
- **Splatter-type?** → Boat spitting
- **All over?** → Multiple sources!

🧹 CONTAMINATION MAP — Clean These 5 Zones | 5 ज़ोन्स साफ करें

🔬 Contamination Sources — In Order of Frequency

1 Guide Rollers	2 Coating	3 Unwind	4 Chamber	5 Anti-Static
3, 4, 5	Shields	Roll Edge	Walls	Bar
Coating zone input	Flaking deposit	Storage dust	Loose Al particles	Dead = pickup

🛡 PREVENTION CHECKLIST | रोकथाम

⏰ EVERY-48-HOUR RULE
Guide rollers 3-5 must be IPA-wiped every 48 hrs — no exceptions

🔌 WEEKLY CHAMBER VACUUM
Remove loose particles from shields and chamber walls during PM

🔥 RETIRE BOATS AT 80%
Don't push boats to end-of-life for high-value customers

📦 UNWIND ROLL CHECK
Inspect every incoming roll for dust/damage before mounting

💡 **KEY RULE — Clean Rollers First!**
45% of pinhole rejections = dirty guide rollers before coating. Clean BEFORE blaming boats or film. हमेशा पहले rollers साफ करो — 45% मामले यहीं हल।