

DSS-P.02.05 | Processing / Manufacturing Features

Draw / Float Swirl (optical patterning)

Float & raw glass feature - reference; generally not "damage"

Diagnosis summary

Pane-scale optical flow patterning-subtle swirls/eddies formed by melt/float-bath flow and composition/temperature variations during manufacture. Presents as low-contrast swirl bands or gentle flow lines that bend straight reflections and modulate sheen, typically strongest at oblique angles/raking light. These are factory optical features, not local surface-relief defects.

Field identification cues

- Surface-catch class (MSRT): SC-0 (none). Make one light, non-marring pass per VIS §5.5; no tactile interruption because this is optical, not relief. Do not abrade or repeat.
- Visual signature: Pane-scale non-directional swirl/flow appearance; no transition edge, no chip flanks, no pits/craters. See VIS definitions for non-directional variation and directional patterning.
- Viewing/lighting: Inspect at 12 / 36 / 72 in, normal + oblique sweep, under raking light; surfaces clean/dry (non-invasive reveal).
- Location/access: Record surface numbering (#1-#4; laminate-internal) on forms; acceptance pertains to the exposed surface being evaluated.

Classification, severity and scope

- Not field damage.
- Between-pane look-alike: If fixed parallax demonstrates a cavity condition, record CAT-5 and refer per project protocol.

Distinguishing criteria

- vs. Ream/Cord/Striae (P.02.04): Striae often appear as linear ribbon/streak patterns; draw/float swirl tends toward curvilinear "eddies." Both are SC-0 and pane-scale.
- vs. Roller wave (P.01.01): Roller wave is periodic flatness deviation from heat-treat; swirls are non-periodic flow patterns from float.
- vs. Abrasion fields (M.02): Abrasion shows directional/web texture and may escalate to slight/clear catch; swirls remain SC-0 with no worked boundary.

Documentation and inspection

- Photo set (VIS): 12 / 36 / 72 in, normal + oblique; note raking usage; capture straight-line reflections (mullion/string) bending across the swirl field.
- MSRT result: Record SC-0; one pass only; non-marring.
- Forms: Pane ID; product family and surface numbering; worked surface Y/N; functional coating present on worked surface?

Safety / repairability boundary: Complete only the non-invasive reveal and inspection steps authorized by the controlling VIS guidance. Classification does not authorize restoration, establish acceptance, or override stop-work, coating, crack, integrity, access, chemical, fall-protection, or project-specific requirements.

Full DSS publication: use the catalog download. Web specification:

<https://a7df714357.nxcli.io/learning-center/resource-center/damage-specification-standards/dss-p-02-05-draw-float-swirl-optical-patterning/>