



DSS-P.02.03 | Processing / Manufacturing Features

Stones / Knots (solid inclusions)

Float & raw glass feature - reference; encapsulated = factory feature; "open" = classify by surface morphology

Diagnosis summary

Stones/knots are solid inclusions within the glass body (e.g., unmelted batch, refractory fragments) produced during glass manufacture. When fully encapsulated, they are manufacturing features (optical/appearance effects) rather than surface-relief defects. Evaluate with VIS lighting/geometry for consistency; product/factory acceptance is distinct from VIS post-restoration acceptance.

Field identification cues

- Surface-catch class (MSRT):
- Encapsulated stone/knott: SC-0 (none) - one light, non-marring pass finds no tactile relief (feature is subsurface). Do not abrade or repeat passes.
- Open (surface-breaking) stone: reads as local pit/crater; expect SC-1/SC-2 depending on depth/edge condition (see CAT-3/4 cues).
- Morphology / visual signature:

Classification, severity and scope

- Encapsulated stone/knott (non-relief): Processing Feature - Not Surface Damage (outside CAT-1...CAT-4); document only.
- Open (surface-breaking) stone: classify by observable morphology + surface-catch: often CAT-3 (clear catch; modeled texture/lines nearby) or CAT-4 if rough chip flanks/pits are prominent at.
- Between-pane/inaccessible look-alike: CAT-5 by location/condition; refer per project protocol.

Distinguishing criteria

- vs. Seeds/Blisters (P.02.02): Seeds are gas inclusions; when open, present as craters but often with smoother edges; encapsulated seeds also read SC-0.
- vs. Hot-particle peppering (Th.01): Thermal pits show bright chip flanks and often occur in clusters/fields; classify per CAT-3/4 morphology if present.
- vs. Metallic/paint specks (Residues/Overspray): Residues change with Non-Invasive Reveal; true inclusions do not.

Documentation and inspection

- Photo set (VIS): 12 / 36 / 72 in, normal + oblique; include raking usage; where practical, capture a straight-line reflection to show absence of a worked perimeter.
- MSRT result: Encapsulated → SC-0; Open → SC-1/SC-2 (record). One pass only; non-marring.
- Forms: Pane ID; surface numbering; worked surface Y/N; coating present on worked surface? (Y/N/Unknown); reveal status; lighting/time.

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-02-03-stones-knots-solid-inclusions/>