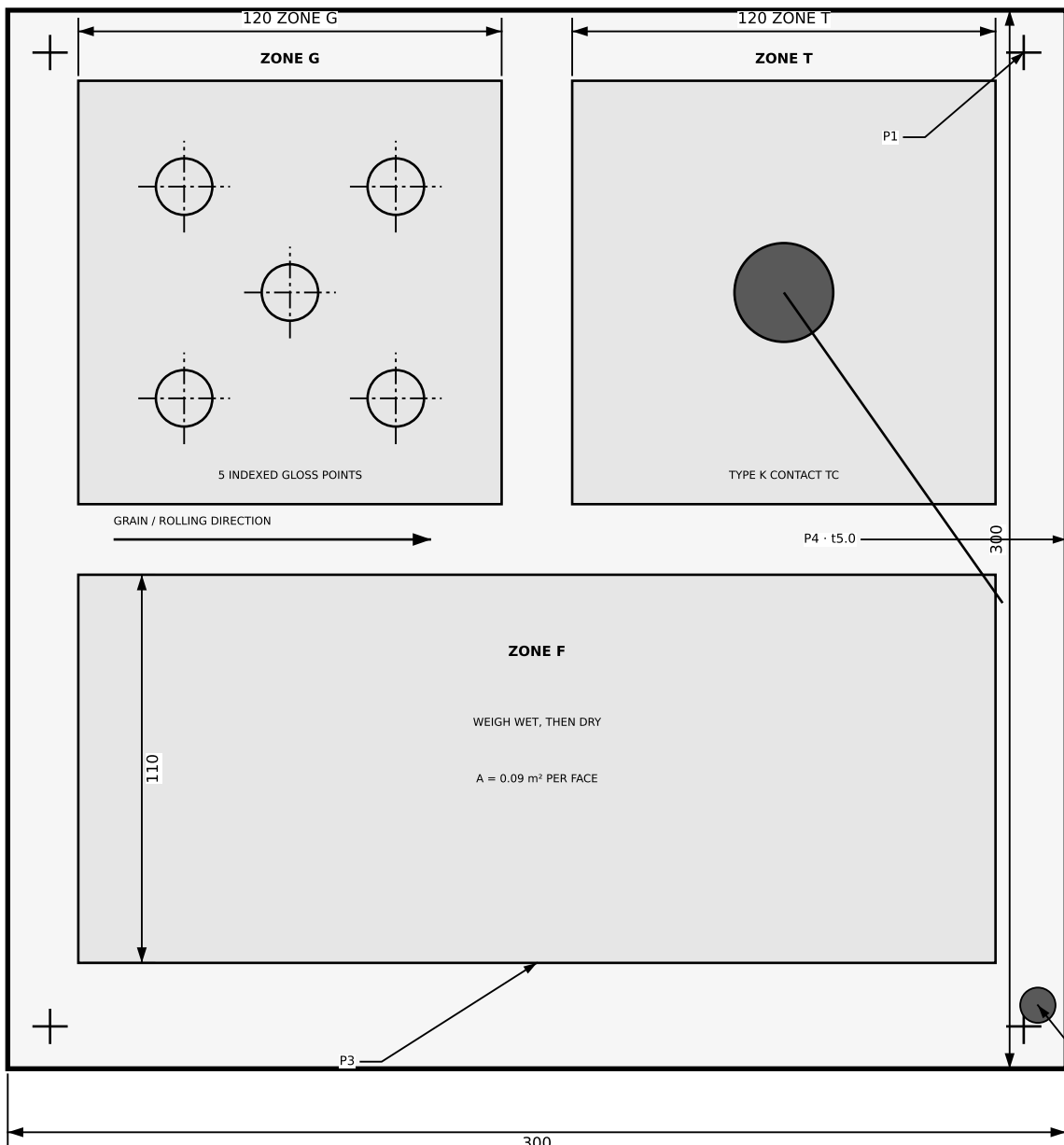


WITNESS PANEL 300 x 300 — TEST ZONE LAYOUT · SCALE 1:2



PANEL IDENTIFICATION

FIELD	REQUIREMENT
Size	300 × 300 × 5.0 mm — the production thickness
Material	S5316L / 1.4404 FROM THE PRODUCTION PLATE HEAT
Certification	EN 10204 3.1; heat number traceable to the gore plate
Processing	BY THE PRODUCTION POLISHER, on the production route, with the production consumables
Issue	BEFORE ANY GORE IS PRESSED — HOLD POINT H2
Quantity	1 test panel + 1 RETAINED witness coupon (same heat, same route) for the humidity / immersion test and the 30 and 90-day visual inspections
Storage	Desiccated wrap; NO PVC contact, no carbon-steel shelving or swarf
Disposal	NOT before practical completion

REJECT AT PRESSING

**HEAVY ORANGE PEEL IS NOT
REMOVABLE BY ELECTROPOLISHING
AND MUST BE REJECTED AT THE
PRESSING STAGE.**

Electropolishing levels micro-roughness, not the macro-waviness a coarse-grained or over-strained press produces. Assess the first-article gore under raking light against the accepted panel BEFORE the run is released.

TEST (a) 60° SPECULAR GLOSS — BEFORE AND AFTER ELECTROPOLISH

1. INSTRUMENT — 60° specular glossmeter to ISO 2813 / ASTM D523, calibrated against a certified black-glass standard ON THE DAY OF EACH READING.
2. METHOD — 5 indexed points in zone G, 3 readings each; report the mean AND the range. THE IDENTICAL POINTS ARE READ BEFORE AND AFTER, indexed from the corner punch marks outside the polished field.
3. SEQUENCE — mechanical #8 to Ra $\leq 0.1 \mu\text{m}$ → READ → electropolish 20-40 μm → citric passivate to ASTM A967 → READ AGAIN.
4. ALSO REPORT — Ra at the same 5 points (0.8 mm cut-off) before and after, plus raking-light photographs.
5. TARGET — ≥ 620 GU AFTER electropolish.

TEST (b) DRY STAGNATION SURFACE TEMPERATURE

1. INSTRUMENT – Type K contact thermocouple (foil / adhesive patch), thermally bonded, lead shaded from direct sun; logger at ≤ 1 min interval.
2. CONDITIONS – ONE CLEAR DAY, panel DRY, mounted at the site orientation and unshaded, over the full solar day. Log wind speed at panel height and ambient air temperature simultaneously; record global irradiance if available.
3. REPORT – peak surface temperature with the coincident wind speed and ambient temperature, and the time spent above each threshold.
4. ASSESSMENT – EN ISO 13732-1 burn thresholds for BARE UNCOATED METAL: $= 65^{\circ}\text{C}$ at 1 s, 56°C at 10 s, 51°C at 60 s.
5. PREDICTION TO BE CHECKED – solving $aG = h(T_s - T_a) + \epsilon\sigma(T_s^4 - T_{\text{sky}}^4)$ at $G = 1000 \text{ W/m}^2$, $T_a = 32^{\circ}\text{C}$, $\alpha = 0.35$, $\epsilon = 0.10$ -0.15 gives 76°C in still air ($h = 8$) and 47°C at 5 m/s ($h = 25$). THE MIRROR FINISH MAKES THE SPHERE HOTTER, NOT COOLER.
6. OUTPUT – confirms or resets the minimum-wetting interlock and the signed residual-risk record.

TEST (c) RESIDUAL ADHERING FILM THICKNESS

1. METHOD — wet the panel to full coverage at the design film rate, then simulate a drain-down: stop the flow and hold the panel at 15° on the drip corner until dripping ceases.
2. WEIGH WET immediately, then dry to constant mass and WEIGH DRY. Balance resolution ≥ 0.01 g. Three cycles; report the mean.
3. COMPUTE — $\delta_{\text{res}} = \Delta m / (p \cdot A)$ with $A = 0.09$ m² per wetted face; report in L/m².
4. ASSUMPTION TO BE REFINED — 0.080 L/m², giving 48 mg/m² of deposit at 600 mg/L TDS = 19.2 nm per shutdown, i.e. the quarter-wave bloom threshold at ~5.2 shutdowns.
5. OUTPUT — the refined spotting rate resets the 45 L rinse-and-restart volume and the annual drying-event budget in the O&M.

PANEL TEST REPORT — REQUIRED CONTENT

ITEM	REQUIRED IN THE PANEL TEST REPORT
R1	Heat number, plate lot, EN 10204 3.1 mill certificate
R2	Polisher name, process route, consumables, dates
R3	Gloss — 5 points × 3 readings, BEFORE and AFTER, mean + range
R4	Ra — the same 5 points, 0.8 mm cut-off, before and after
R5	Raking-light photographs, before and after
R6	Temperature — full logged trace, peak, coincident wind and ambient
R7	Irradiance record, or the nearest station data with the distance
R8	Film — wet and dry masses, 3 cycles, computed L/m ²
R9	Instrument calibration certificates, dated
R10	THE SIGNED FINISH DECISION — retain or delete electropolish
R11	Location and identity of the retained witness coupon

TEST SEQUENCE

1. Sequence the three tests on the ONE panel: (a) gloss BEFORE electropolish → (b) dry stagnation temperature on the as-mechanically-polished face → electropolish and passivate → (a) gloss AFTER → (c) residual film.
2. (b) may be repeated after electropolish if the surface emissivity changes measurably — the burn assessment must reflect the finish actually specified.
3. Report as ONE numbered document with all raw logged data attached; retain in the handover dossier.

FINISH DECISION GATE

"MIRROR #8 + ELECTROPOLISHED" IS SELF-CONTRADICTIONARY AS WRITTEN – ASSDA states a mechanically mirror-polished surface will normally LOSE its mirror reflectance if electropolished. THIS PANEL DECIDES IT, AND IT IS DECIDED BEFORE ANY GORE IS PRESSED.

IF 60° GLOSS HOLDS ≥ 620 GU AFTER ELECTROPOLISH → RETAIN ELECTROPOLISH 20-40 μm + CITRIC PASSIVATION TO ASTM A967.

IF GLOSS DROPS → DELETE ELECTROPOLISH. SPECIFY MECHANICAL #8 ($R_a \leq 0.1 \mu m$) + CITRIC PASSIVATION TO ASTM A967, CLEANING TO A380.

THE DECISION IS RECORDED, SIGNED AND ISSUED AS A DRAWING REVISION TO SH13 BEFORE THE SHELL ORDER IS RELEASED.

1. THE PANEL IS A HOLD POINT (H2). No gore may be pressed and no shell plate cut until all three test reports are issued and the finish decision above is signed.
2. One panel carries all three tests. Sequence them: (a) gloss BEFORE electropolish → (b) dry stagnation temperature on the as-mechanically-polished face → electropolish → (a) gloss AFTER → (c) residual film. (b) may be repeated after electropolish if the emissivity changes measurably.
3. Reports are issued as a single numbered document with the heat number, the polisher's name, the instrument calibration certificates and the raw logged data attached. Retain in the handover dossier.
4. The retained witness coupon supports the humidity / immersion test and the 30-day and 90-day visual inspections (SH13 Q3, Q4)—ferroxyl is NOT used on any visible mirror surface.

REV	DATE	DESCRIPTION	BY
D	2026-08-05	CONCEALED SKIRT ANCHORAGE, RESERVOIR + PLANT, PEBBLE COLLECTOR	NX
E	2026-08-20	REV D.2 ALIGNMENT + VISUAL QA CORRECTIONS	NX
F	2026-09-03	LOGO ENGRAVING ADDED (SH15); SHEET COUNT 14 -> 15	NX
G	2026-09-05	AUDIT CLOSE-OUT: CART 082 FB, SLOT 24, 24 TRAYS, DN80	NX
G.2	2026-09-06	PART DRAWINGS SH30-38; SLOTS AZ22.5; DOUBLER R995	NX
G.3	2026-09-06	SH37 BRACKET, SH42 WELD MAP, P-16 BELLOW; IFF	NX

SPA FOUNTAIN — B7 SPA, MALDIVES

SPA-F-SH14 — WITNESS PANEL SPECIFICATION

DRAWN: NaXlef Eng.		CHECKED: NX 2026-09-06		APPROVED: I. NAZEEF 2026-09-06		STATUS: IFF REV G.3	
DATE: 2026-09-06		REV: G.3		UNITS: mm		SCALE: AS NOTED	
A3 · SHEET 14/25							
ISSUED FOR FABRICATION — REV G.3 · HOLD POINTS PER SH42 WORK TO FIGURED DIMENSIONS · ISO 2768-mK U.O.S.							