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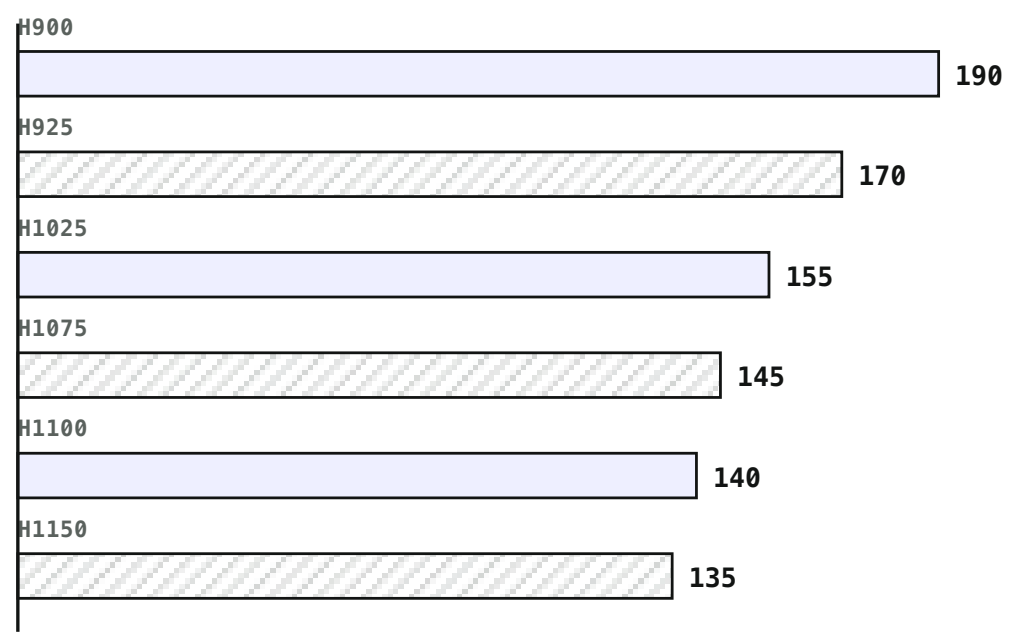
15-5PH Stainless Steel

17-4PH with better transverse ductility and cleaner structure in big sections.

REFERENCE DRAWING — NOT APPROVED DATA · THE SRM ALWAYS GOVERNS

15–5PH

BAR FTU BY CONDITION · KSI



PARTS LIST

#	ITEM	NOTE	SRC
1	Bar	AMS 5659	HDBK-5J
2	Plate H1025	AMS 5862	HDBK-5J
3	Service limit	600 F	HDBK-5J
4	Best toughness	H1150M	HDBK-5J

READ BEFORE USE

NEVER IN CONDITION A

H900/H925: NOT FOR FRACTURE TOUGHNESS

S BASIS

NOTES

1. Dimensions in inches. Do not scale: the SRM sets the values.
2. For reference. The applicable manual always governs.
3. Based on MIL-HDBK-5J, AC 43.13-1B.

REVISIONS

REV	DESCRIPTION	DATE
A	First issue	2026-10-30

The Aviation Point. Structural repair reference

TITLE			
15-5PH conditions			
DRAWING NO.	REV	SCALE	SHEET
TAP-DWG-075	A	NTS	1 OF 1
APPLIES TO: Aircraft materials			

DO NOT SCALE DRAWING

15-5PH: bar Ftu by condition Values from MIL-HDBK-5J, S basis unless noted.

Key facts

Property	Value	Source
Composition	Chromium 14.0–15.5 %, nickel 3.5–5.5 %, copper 2.5–4.5 %, niobium plus tantalum 0.15–0.45 %, carbon 0.07 % max	Metal supplier's 15-5 PH datasheet, chemical composition (AMS 5659 / AMS 5862)
Use	Parts needing corrosion resistance and high strength to 600 °F; good transverse ductility and strength in large sections	MIL-HDBK-5J, par. 2.6.7.0
Bar	AMS 5659	MIL-HDBK-5J, Table 2.6.7.0(b)
Plate	AMS 5862, H1025	MIL-HDBK-5J, Table 2.6.7.0(c)
Never	Use in Condition A; use H900 or H925 where good fracture toughness or impact is required	MIL-HDBK-5J, par. 2.6.7.0
Best notch toughness	H1150M, recommended for cryogenic use	MIL-HDBK-5J, par. 2.6.7.0

Design allowables — 15-5PH bar (AMS 5659) by condition, S basis

Condition	Ftu	Fty	Elongation L, %	Elongation T, %
H900	190	170	10	6
H925	170	155	10	7
H1025	155	145	12	8
H1075	145	125	13	9
H1100	140	115	14	10
H1150	135	105	16	11

Key points

- **Never Condition A in service.**
- **H900/H925 and toughness don't mix.**

Educational reference only, not approved data. Always consult the applicable SRM, AMM, or AC 43.13-1B and your certifying authority.

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SOURCES · MIL-HDBK-5J, Metallic Materials and Elements for Aerospace Vehicle Structures · FAA AC 43.13-1B CHG 1 · MMPDS · Metal supplier's 15-5 PH datasheet

SCAN · OPEN THIS GUIDE
theaviationpoint.com/materials/steel/15-5ph/

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