

DATA ITEM DESCRIPTION		Form Approved (MIL-STD-1070)	
1 TITLE CHEMICAL AND PHYSICAL PROPERTIES FOR FORGING OR CASTING ANALYSIS REPORT		2 IDENTIFICATION NUMBER DI-FORG-81196	
3 DESCRIPTION/PURPOSE 3.1 The Chemical and Physical Properties for Forging or Casting Analysis Report provides information on the chemical composition and mechanical properties of forgings or castings.			
4 APPROVAL DATE (YYMMDD) 910502	5 OFFICE OR PRIMARY RESPONSIBILITY (OPR) MR	6a DTK APPLICABLE	6b GROUP APPLICABLE
7 APPLICATION/INTERRELATIONSHIP 7.1 This Data Item Description (DID) satisfies the requirements of paragraph 3.12 of MIL-S-46172A. 7.2 This Data Item Description (DID) supersedes DI-P-1636.			
8 APPROVAL LIMITATION		9a APPLICABLE FORMS	9b AMSC NUMBER A6120
10 PREPARATION INSTRUCTIONS 10.1 <u>Reference documents</u> . The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendments, notices, and revisions, shall be as specified in the contract. 10.2 <u>Format</u> . The Chemical and Physical Properties for Forging or Casting Analysis Report format shall be contractor selected. Unless effective presentation would be degraded the initially used format arrangement shall be used for all subsequent submissions. 10.3 <u>Content</u> . The Chemical and Physical Properties for Forging or Casting Analysis Report content shall be in accordance with the elements of Figure 1 and the following requirements. 10.3.1 <u>General information</u> . RECORD OF TREATMENT AND TEST OF (enter appropriate identification), Contract (name and address of contractor), Contract Order No., Date, Specification No., Drawing No., Forging/Casting No., Heat No., Date Cast/Forged, Shipped To (Released), and Date Shipped, Released. 10.3.2 <u>Chemical analysis</u> . The complete Obtained and Required chemical composition (C - carbon, MN - manganese, P - phosphorus, S - sulfur, Si - silicon, Ni - Nickel, Cr - chromium, Mo - molybdenum, V - vanadium, blank - other) of the forging or casting. <p style="text-align: right;">(Continued on Page 2)</p>			
11 DISTRIBUTION STATEMENT  DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.			

10. PREPARATION INSTRUCTIONS (Continued)

10.3.3 Physical information. Macroetch Satisfactory, Macroetch Not Taken, Cold Worked and Soaked, Not Cold Worked, Ingot No., Type of Ingot, Ingot Size, Length (inches), Total Weight, Wt (weight) Above Piece, Wt (weight) Below Piece, Date Forged.

10.3.4 Heat treatment procedure. A complete and detailed description of the heat treatment procedure including the date completed.

10.3.5 Mechanical properties. Specimen Locations, Y.S. (yield strength), T.S. (tensile strength), Elong Percent (percent elongation), R.A. Percent (reduction of area %), Hardness, Fracture, and Charpy (Ft-Lb) values.

10.3.6 Authentication. The Chemical and Physical Properties for Forging or Casting Analysis Report shall include identification of the person performing the physical tests (PHYSICAL TESTS MADE BY) and shall be signed by the appropriate Government Inspector with the Place and Date identified.

DI-FURG-81196

Chemical and Physical Properties for Forging or Casting Analysis

RECORD OF TREATMENT AND TEST OF 1	WATERILITY ANSBRIL										
Contract No.		Drawing No.		Contract Order No.		Forging/Casting No.		Date			
Specification No.		Shipped To		Date Shipped, Released							
Chemical Analyses Made By:											
C	W	P	S	SI	EL	CR	Mo	V	Macroetch Satisfactory		
Observed									Microetch Not Taken		
Required									Cold Worked and Sealed		
									Hot Cold Worked		
Ingot No.		Type of Ingot				Ingot Size			Inches Length		
Total Weight		Wt Above Piece				Wt Below Piece			Date Forged		
TREATMENT				PHYSICAL TESTS MADE RE							
Date Completed:				Specimen Locations	T.S.	T.S.	T.S.	Elon Percent	R.S. Percent	Hardness <sup>3</sup>	Fracture <sup>4</sup>
Specimen Locations				REQUIRED							
		Charpy (P-2b)	Remarks								

1 Enter the numbers of ALL forging or castings represented by these test; marking with an asterisk those from which specimens are taken.

2 Major firm name and address.

3 Type of hardness machine.

4 Capped Cr-Crystalline Irregular I-Irregular B-Metallic B-Lustrous Ceramics  
 P-Polished L-Laminated V-Voidy

Figure 1. Sample Format