Global Resources (Cr-Mo steels)-API

1. API Publ. 938 (WRC-Bulletin 411); Experimental Study of Causes and Repair of Cracking of 1 1/4Cr-1/2Mo Steel Equipment, 1996
2. API RP 934-C-2008; Materials and Fabrication Requirements for 1 1/4Cr-1/2Mo Steel Heavy Wall (2 inch ≤ thickness ≤ 4 inch) Pressure Vessels for High Pressure Hydrogen Service Operating at or Below 825°F (441°C)
3. API 941; Steels in Hydrogen Services at Elevated Temperatures and Pressures in Petroleum Refineries and Petrochemical Plants, 1998 Ed.
4. API RP 934-A-2008; Materials and Fabrication Requirements for 2 1/4Cr-1Mo and 3Cr-1Mo Steel Heavy Wall Pressure Vessels for High Temperature, High Pressure Hydrogen Service
5. API RP 934-B on construction (2009); Guidelines for Fabrication of Heavy Wall Reactors made of V modified Cr-Mo Steel
6. API RP 934-D on construction (2009); Guidelines for Materials and Fabrication of 1 1/4Cr-1/2Mo Vessels
7. API RP 934-E on construction (2009); Guidelines for Materials and Fabrication of 1 1/4Cr-1/2Mo Vessels for High Temperature (> 850°F (454°C))
6. API Publ. 959; Characterization Study of Temper Embrittlement of Cr-Mo Steels
7. API Technical Bulletin 938B, Use of 9Cr-1Mo-V (Gr 91) Steel in the Oil Refinery Industry, 2006 (?)
8. API RP 920; Prevention of Brittle Fracture of Pressure Vessels, 1990
10. API RP 579; Fitness For Service, 2000
11. API RP582; Welding Guideline, 2001
11. API Publ. 581 RBI, 2000
Global Resources (Cr-Mo Steels) - WRC Bulletin

1. WRC-275; The Use of Quenched and Tempered 2 1/4Cr-1Mo steel for Thick Wall Reactor Vessels in Petroleum Refinery Process: An Interpretative Review of 25 years of Research and Application, 1982
2. WRC-390 Failure of Welds at Elevated Temperatures by G.R. Stevick, March 1994
5. WRC-409 Fundamental Studies of the Metallurgical Causes and Mitigation of Reheat Cracking in 1 1/4Cr-1/2Mo and 2 1/2Cr-1Mo Steels, by C.D. Lundin and K.K. Khan, February 1996
7. WRC-412 Challenges and Solutions in Repair Welding for Power and Processing Plants, Proceedings of a Workshop, June 1996
8. WRC-416 Creep Crack Growth Behavior in Weld Metal/Base Metal/Fusion Zone Regions in Chromium Molybdenum Steels, by R.H. Norris and A. Saxena, November 1996
9. WRC-439 Use of Low Carbon 1 1/4 Cr-Mo Weld Metal for Fabrication of Cr-Mo Components, by C.D. Lundin, P. Liu, G. Zhou and K. Kahn - February 1999
Global Resources (Cr-Mo Steels) - ASME

1. ASME Sec VIII, Div.1/2, Mandatory Appendix 31/para.3.4 - Rules for Cr-Mo Steels with Additional Requirements for Welding and Heat Treatment
2. ASME Code Case 2098-2 (1995) 2 1/4Cr-1Mo-1/4V
3. ASME Code Case 2151-1 (1997) 3 Cr-1Mo-1/4V-Cb-Ca
5. ASME Code 2355-2 (1996) Use of UT, 3D size of defects
6. Code Case 1943 Seamless Modified 9Cr-1Mo, ASME Sec I, 1983
7. Code Case 1973 Modified 9Cr-1Mo Material, ASME Sec VIII, Div 1, 1985
9. Code Case 2179-3 Seamless 9Cr-2W Material, ASME Sec I and Sec VIII, Div 1, 1999
Global Resources (Cr-Mo Steels) - Others

2. Many Articles in Welding Journal
3. Many Articles in Welding Journals in ASME, NACE, Elsevier Science, Metallurgical and Materials Transactions, and Company Lab (i.e. TWI, Japan Steel Makers, Euroweld, etc.)