10 REFERENCIAS BIBLIOGRAFICAS:

10.1 Unidades 1 a 3:

A. J. De Ardo. ”New Developments in the alloy design of microalloyed and other modern HSLA steels”. HSLA Steels: Processing, properties and applications –Ed. TMS – pp 21-31 – 1990.

Aihara S. and Okamoto K.. "Influence of LBZ on HAZ toughness of TMCP steels”. Conference on the metallurgy, welding and qualification of HSLA steel weldments – pp. 402- 426- 1990.

.A. J De Ardo, C.I. Garcia, K. Cho and M. Hua “New method of characterizing and quantifying complex microstructures in steels” Conference High Strength Steels – pp 1-31 – 2008.

A. M. Sage. ”An Overview of the use microalloys in HSLA steels with particular reference to V and Ti”. HSLA Steels: Processing, properties and applications –Ed. TMS – 1990 - pp 51-61

ANSI/API RP 2Z-92. Recommended practice for Preproduction Qualification for Steel Plates of offshore Structures – 1992.

API 5L “Specification for line pipe” - 2007

API Standard 1104 – 19° Edition, 1999 y 20º Edition, 2005 – “Welding of pipelines and related facilities”.

ASTM E 384-07 “Standard Test Method for Microindentation Hardness of Materials”

ASTM E112-96, “Standard Test Methods for Determining Average Grain Size”.

B. de Meester. “ The weldability of modern structural TMCP Steels”- ISIJ International. Vol 37 . N°6, pp 537-551 – 1997.

B.C.Kim, S.Lee N.Kim and D.Lee.- Microstructure and LBZ phenomena in HSLA steel welds. Metall. Transact. A. V22, Jan. 1991, pp131-149.

Chawla, K. K. Hydrogen-induced cracking in two linepipe steels, Journal of Materials Science 21, p. 3777-3782. 1986.

C. L. Davies and J. E. King.- Effect of cooling rate on intercritically reheated mict. And tough. In HSLA steel. Mat.Scie.Tech. Vol. 9, pp 8-15. 1993

D. Codega. “Análisis de la soldabilidad en chapas de aceros API 5LX70 y API 5L X70 HIC” Tesis de grado UNCo – 2006.

D.S Kim, C.L. Tsai, J. Llao and J. Paritan II. “Evaluation of LBZ using the finite element Method”. Welding Journal. pp 257s-264s. 1994.

DOC. IIS-IIW-1128-91.-Guide to weld. and metall. of weld. of steels proc. by TMCP of AC.. Welding in the world. Vol. 33, Nro. 1,pp-34-65- 1.991.

DOC. IIS-IIW-1251-94.-TMCP steels and their welding. Welding in the world. Vol. 35, Nro. 6 ,pp-375-390- 1.994.

Doc. IIW Nº II-1566-05. “Investigation of HAC – susceptibility of multi layer welds with the BED BEND TEST” - 2005

DOC IX-H-619-05 “Corrosion testing of welds, a review of methods”- 2005

G. Tither. ”The Development and applications of Nb containing HSLA steels” . HSLA Steels: Processing, properties and applications –Ed. TMS. pp 61 - 80 – 1990.

G. Malaisi, “Criterios para la selección y especificación de requisitos adicionales de materiales para sour service”. Revista de la Asociación Argentina de Materiales, Vol. 4, No. 2, 2007.

Hayashi. K.; Araki K. and Abe T. “High performance steel plates for tank and pressure vessel ues high strength steel plates with excellent weldability and superior toughness for the energy industry”. JFE. Technical report, N° 5. 2005.

Heisterkamp F.; Hulka y Gray J.M “Metallurgical Concept And Full-Scale Testing of High Toughness, H2S Resistant 0.03%C - 0.10%Nb Steel”. Niobium Technical Report, CBMM, Sao Paulo, February 1993.

H. G. Pisarski. “ HAZ Toughness evaluation”. Conference on the metallurgy, welding and qualification of HSLA steel weldments – pp. 351-382. 1990

H. Takechi. “Newly developed High Strength steels in Japan HSLA Steels: Processing, properties and applications –Ed. TMS. pp 33 - 36. – 1990

Japan Industrial Standard - Method of Y-groove weld cracking test, JIS Z 3158 1993.

J. Capelle and G. Pluvinage. “Sensitivity to hydrogen embrittlement of X52, X70 and X100 pipe steels”. Conference High Strength Steels – 2008

K. Hulka, et al. “Weldability of high strength large diameter pipe steel”. HSLA Steels: Processing, properties and applications –Ed. TMS. pp. 495 -500, 1990.

Matsuda F., Fakuda Y. et al. Review of mechanical and metallurgical investigations of martensite-austenite constituent in welded joints in Japan. Welding in the world. vol 37, Nro 3. pp 134-154 - 1996.

Lark Erik Svensson. “Control of microstructures and properties in steel arc welds”. Ed CRC – pp- 64-71; 101-107 - 1994

Lomozik, M. “Effect of the welding thermal cycles on the structural changes in the heat affected zone and on its properties in joints welded in low-alloy steels”, Welding International, 14 (11), p. 845 –850, 2000.

Li, Y., Wang, J. and Liu, P. “Fine structure in the inter-critical heat-affected zone of HQ130 super-high strength steel” Bull. Mater. Sci., Vol 26, N 2, pp. 273-278, 2003.

Metals Handbook, X ma edicion – Vm 1. pp 390 -423. 1990.

Method of Y-groove weld cracking test, JIS Z 3158 (1993).

NACE Standard MR0175/ISO 151156. “Standard material requirements. Sulfide stress cracking resistant metallic materials for oilfield equipment”, 2002.

NACE Standard TM0177. “Laboratory testing of metals for resistance to sulphide stress cracking and stress corrosion cracking in H_2S environments”. 2005.

NACE Standard TM0284. “Evaluation of pipeline and pressure vessel steels for resistance to HIC”, 2003.

Nakata H.; Kami C., Mathuo N. “Development of API X80 grade electric resistance welding line pipe with excellent low temperature toughness”. JFE Technical report – N° 12-Oct. – 2008.

Omwen, G.M. el al. “Effect of welding parameters and H2S partial pressure on the susceptibility of welded HSLA steels to sulfide stress cracking”. Welding Journal, USA, 82(6), p. 136-s -144-s, 2003.

Pascoal J.P. Bordignon and K Hulka. ”An alloy design approach for economy in processing of modern HSLA steels”. HSLA Steels: Processing, properties and applications –Ed. TMS - pp 83 - 92. 1990.

Q.Y.Long, D. Tseng, and K.Tangri.- Retained austenite in intercritically annealed HSLA steel. Metallography 20:61-73 - 1987.

Quesada H. J. “Evaluación de la susceptibilidad a fisuración en frio en soldaduras de aceros de alta resistencia” – Tesis Maestria- UNCo- 2002.

Quesada H. J. “Evaluación de la susceptibilidad a fisuración en frio en soldaduras de aceros de alta resistencia” – Tesis Maestria- UNCo- 2002.

R. Bruna; F. Siciliano; P. Boardignon y C. Nomaksteinsky. “Development of High Strength Nb-V-Ti Steels for ERW Pipes by Thermo-Mechanical Controlled Processing at Siderar”. Anales del 59º Congreso Annual da Associação Brasileira de Metalurgia e Metáis-ABM, São Paulo, Brasil, 2004.

R. D.Kane y J.P. Ribble. "Corrosion of microalloy steel welfdments: HIC/SSC”- Conference on the metallurgy, welding and qualification of HSLA steel weldments –. pp. 752- 779- 1990.

R. Taillard, P. Verrier, T. Maurickx, and J.Foct. “Effect of Si on CGHAZ Tough. And microstrcture of microalloyed Steels”. Metallurgical and materials transactions. Vm. 26A , pp447-457. 1995.

R. M. Ale, J. Rebello, and J. Charlier. A metallographic technique for detecting Martensite-Austenite constituent in the weld HAZ, of an micro-alloyed steel. Materials Characterization. 37:89-93 - 1996.

Rudi M. Denys. “Wide –plate testing weldments: Part I – Wide plate testing perspective ASTM STP 1058 – pp 160 -174 - 1990

Sakuma, O. Matsumura, and H. Takechi.-Mech. Prop. And ret. Aust. In interc. Heat-treated bain. ..Met. Transact. V 22A. feb. 1991.

Shiga . "Effects of Steel., and other HSLA Stying, and rolling on the HAZ Struct. and. Prop. in microalloyed plate and line pipe". Conference the metallurgy, welding and qualification of HSLA steel weldments. pp 327-350. 1990.

S. Lee, B.Chun Kim and D. Kwon. “Correlation of microstructure and fracture properties in Weld HAZ of TMCP steels”. Metall. Transact. A. V23A, Oct. 1992, pp. 2803-2816.

S. Lee, B.Chun Kim and D. Kwon. “Fracture toughness analysis of HAZ in HSLA steel welds”. Metall. Transact. A. V24A, pp. 1133-1141. May. 1993.

Surian, E.S.; Ramini de Rissonne, N.M.; De Vedia L.A. “Influence of Molybdenum on Ferritic High-Strength SMAW All-Weld Metal Properties”. Welding Journal, 84 (4), 53-s a 62-s, 2005.

Svoboda H.G. et al. The effect of welding procedure on ANSI/AWS A5.29-98 E81T1-Ni1 flux cored wire deposits, IIW- International Institute of Welding Doc. II-A-136-04 and Welding Journal, 83 (11), 301s-307s, 2004.

Tamehiro, H. “Properties of High-Toughness X80 Line Pipe Steels”, Anales del International Symposium on Accelerated Cooling of Rolled Steels”, Canadá, Agosto 23-26, 1987.

T. Koseki y G. Thewlis “Inclusion assisted microstructure control in C-Mn and Low alloy steel welds”. Material Science and Technology. Vol21N° 8 – pp 867-879 - 2005.

Twelis, G. “Pipeline Welds-effects of Pipe Material and Consumables Composition”, Joining and Materials, p. 25, January 1989.

Y. Li, D.N. Crowther, N. J.W: Green, P.S. Mitchell and T.N. Baker. “The effect of V y Nb on the properties and microsructure in the IRCGHAZ in Low C microalloyed Steels. ISIJ International Vol 41 (2001) N°1. pp 46-55

W. B. Morrinson. Status of HSLA Steels Development. Conference on the metallurgy, welding and qualification of HSLA steel weldments. pp 3-33 – 1990

10.2 Unidades 5 a 7:

API 570 - Piping inspection Code. Inspection, repair, alteration and rerating of in service piping system.- 2005.

API PR 2201- Procedure for welding or hot tapping on equipment in service - 1995.

API specification 5L. Specification for linepipe American Petroleum Institute. - 2007

ASME ,N Y, PD “Repair and hot tap welding on pressurized pipelines”, -Vol 14 1987, pp 1-10.

ASME B 31.4 – 2001 “Pipeline transportation systems for liquid hidrocarbons and other liquids”.

Avelino Vazquez Gonzalez – “Consideraciones relativas a la soldadura de gasoducto” . soldadura t tecnologia de union – 1993 N° 24/23.

Cisilino, A.P. et al – Minimum thickness for circumferential sleeve repair fillet welds in corroded gas pipelines - International Journal of pressure vessel and piping 79. Pp 67 – 76 – 2002.

D. Nolan, Z. Sterjovski and D. Dunne, “Modelling of HAZ hardness in C-Mn Pipeline steels subjected in – service welding procedures. IIW Document Nº IX-2165-05.

Gordon J.R. y otros, Fitness for purpose ass. Proc. For sleeve in pipelines. AGA. 1994.

http://calculations.ewi.org

J. F. Kiefner; W.A. Bruce y D. R. Stephens – Pipeline in service repair manual – Edison Welding institute, Battelle memorial Institute. PRCI Nº L51716. 1994.

J.L Otegui; A. Rivas; C. Manfredi, C. Martins – Weld failures in sleeve reinforcements of pipelines –Engineering failure analysis 8. pp 57 –73. 2001

J.L Otegui; A. Cisilino; A.E.Rivas; M. Chapetti; G. Soula – Influence of multiple sleeve repairs on the structural integrity of gas pipelines – International Journal of pressure vessel and piping. pp 759 –765. 2002.

M. D Chapetti; J.L. Otegui; C. Manfredi; C.F. Martins. “Full scale experimental analysis of stress states in sleeve repair of gas pipelines” - International journal of pressure vessels and piping 78 – pp. 379 – 387. 2001.

N. Yurioka,. “TMCP steels and their welding”, Welding in the World, v. 35, Nº 6, pp. 375-390, 1995.

N. Yurioka,. et al. “Carbon equivalents to assess cold cracking sensitivity and hardness of steel welds”, Nippon Steel Technical Report, Nº 20. 1987.

N Yurioka, M Okumura, T Kasuya and HJ Cotton, “Prediction of HAZ Hardness of transformable Steels”, Metals Construction. Pp 217R -223R. April, 1987

P. N.Sabapathy, M.A. Wahab, M.J. Painter. “The prediction of burn –through during in-service welding of gas pipelines” –International journal of pressure vessels and piping 77 -– pp. 669-667. 2000.

P. N Sabapathy; M.A. Wahab; M.J. Painter. “Numerical models of in-service welding of gas pipelines. Journal of materials processing technology”. Pp. 118, 14-21 - 2001

R. J. Belanger and B.M. Patchett. “The influence of working fluid physical properties on weld qualification for in service pipelines”. Welding Journal Welding research .-– pp 209s - 214s. August 2000-

Smith K.y Wilson M. Stress analysis of a fillet weld between a pipe and sleeve reinforcement. GCERS.File Nº 2633/35 and 2597. 1972.

W. A. Bruce. “Industry Standards catch up with In – Service Welding”. Welding Journal. pp 43 -46. 1999.

Welding Handbook – Vm 1 – 9 na Ed. -2001