

The producer of the steel must certify the material as type 316 if it is to be used as type 316 instead of type 316l. product forms and standards of 316/316l stainless steel product forms material standards plates, sheets & strips astm a240, a666 billets, bars & rods astm a276, a484, a479 forgings (flanges & fittings) astm a182, a473 wires astm a313, a368, a478, a492, a493, a580. the addition of molybdenum improves general corrosion and chloride. grade 316 stainless steel properties. 316/ 316l ugima ® typical analysis % c si mn p s cr ni mo n min. the molybdenum addition ensures more resistance to. 289 lb/ in3: melting point: ° c: ° f: specific heat capacity: 500 j/ kg· k at 20 ° c: 0.

27 mm) in widths up to 12. it also contains molybdenum which increases general corrosion resistance, improves resistance to pitting from chloride ion solutions, and provides increased strength at high temperatures. aisi 316l / en 1. the austenitic stainless steel aisi 316l is a metallic material derived from aisi 316 stainless steel, material referenced in the american standard of surgical instruments astm f899, considered as clinically established and recognized material (state- of- the- art) for devices medical. 12 btu/ lb· ° f at 68 ° f: electrical resistivity: 0. these push- in fittings specification table) are equipped with fda- compliant fkm sealing rings as standard, on request they are pdf available with fda- compliant and ktw- approved epdm sealing rings. 316 chemical composition c carbon - 0. this standard has been approved for use by agencies of the department of defense.

the resultant composition gives these steels much improved corrosion resistance in many aggressive environments. at 68 ° f: magnetic permeability: 1. the material can be used at temperatures up to 550 ° c. the molybdenum gives 316 better overall corrosion resistant properties than grade 304, particularly higher resistance to pitting and crevice corrosion in chloride environments. there is commonly no reasonable price distinction between stainless steel 3I. marine grade stainless steel. introduction: types 316, 316l are molybdenum- bearing austenitic stainless steels. typical applications. for elevated temperature applications the high carbon variant, pdf 316h stainless steel and the stabilised grade 316ti stainless steel should be employed. specifications type 316/ 316l can be supplied to meet ams, astm, asme, qqs, and mil- s. 08% maximum mn manganese - 2.

75% maximum cr chromium - 16. 1 mpa = 1 n/mm2. alloy 316 is chrome- nickel austenitic alloy. ati 316tm (uns s31600), ati 316tm (s31603), ati 317tm (s31700) and ati 317tm (s31703) alloys are molybdenum- bearing austenitic stainless steels which are more resistant to general corrosion and pitting/ crevice corrosion than the conventional chromium- nickel austenitic stainless steels such as ati 304. 316l heat treatment. because of the molybdenum, aisi- 316l has better overall corrosion resistance than aisi- 304, with particular resistance to pitting and crevice corrosion in chloride environments. pdf 10 description » 316/ 316l ugima ® is ugitech's improved machining grade produced only by ugitech. these steels contain a higher percentage of nickel than 304ss.

aisi astm 316 stainless steel properties such as chemical composition, physical properties, mechanical properties, magnetic properties are summarized in the tables below. 02% iron balance availability ss 316l is available from hamilton precision metals as aisi 316l standard pdf strip product from 0. alloy 316/ 316l (uns s31600/ s31603) is a chromium- nickel- molybdenum austenitic stainless steel developed to provide improved corrosion resistance to alloy 304/ 304l in moderately corrosive environments. 316 / 316l dual certified holds a lower carbon content than 316 aisi 316l standard pdf and minimises carbide precipitation caused by welding. in addition to excellent corrosion resistance and strength properties,

grades 3I also provide the excellent fabricability and formability which are typical of austenitic stainless steels. aisi 316I physical properties: metric: imperial: density: 8. 4404 stainless steel. 1 this speci**I**cation2covers seamless, straight- seam welded, and heavily cold worked welded austenitic stainless steel pipe intended for high- temperature and general corrosive service. corresponds to 1. properties are similar to 304 / 304I however 316I exibits higher strength at elevated temperatures. austenitic stainless steel. 01 (approximate) – elastic modulus. 4401 s31603/ en 1/ 4404. astm sae aisi 316I physical properties. it is identical in every way to regular 316I, except with respect to machinability. type 316 and type 316I when the material meets both the lower carbon limit of type 316I and the slightly higher strengths of type 316. f m u n, _]^a_]`zy[kj]^_]`zy[r_^rj\`py[x\^\\u xr]^xrk`~]y\]` u k \^_``zy[]^\a]`zy[rrj^r\r`py. 316I, the low carbon version of 316 stainless steel, is immune to grain boundary carbide precipitation (sensitisation). the datasheet below gives ss 316I density, melting point and magnetic permeability.

alloy 316l is an extra low carbon version of type 316 chrome- nickel austenitic alloy. astm sae aisi 316 stainless steel data sheet and specification are listed in the table below, including chemical composition and properties. stainless steel 316l grade is the low aisi 316l standard pdf carbon version of stainless steel 316 and it is immune from sensitization. it is also available in foil as. an austenitic stainless steel containing mo to increase resistance to pitting corrosion. so it is extensively utilized in heavy gauge welded components. this stainless steel grade has very low magnetizability, excellent welding properties and is suitable for cold forming. grade 316 is the standard molybdenum- bearing austenitic grade, second stainless steel in importance to 304.

suitable for many aggressive media, in particular at higher pressures. aisi- 316l is the standard molybdenum- bearing grade, second only to aisi- 304 in importance among austenitic stainless pdf steels. 4404 is a stainless austenitic steel with very good corrosion resistance. 00% maximum si silicon - 0. this makes it suited to use in heavy gauge (over about 6mm) welded components. ss 316l (uns s31603) nominal composition chromium 17. the fkm seal is fda- compliant and can be. seamless and welded pipes astm a312, a358, a270, a269, a249, a213, a813, a814. the tables below give aisi 316 vs 316l stainless steel mechanical properties such as yield strength, tensile strength, elongation and hardness in different product forms and conditions. even down to cryogenic temperatures the austenitic structure gives these grades. it is often utilized in process streams containing chlorides or halides.