

inspection criteria 检验标准
 installation site 安装现场
 instrument air receiver 仪表空气接受器
 instrument capillary tube 仪表控制管线
 instrument master control room 仪表总控制室
 insulating flange 绝缘法兰
 insulation 保温
 insulation (heat traced) 保温加热器
 intact / damage stability 完整/破损稳性
 interference (杆件之间的)相碰, 打架
 intergranular corrosion 晶间腐蚀
 intermediate strength steel 中强度钢
 intermittent welding 断续焊
 internal and external beveling 内外坡口
 internal diameter 内径
 internal quality audits 内部质量审核
 internal stress 内应力
 interpass temperature 层间温度
 intersected pipe 被交管
 intersection line 相关线
 invitation for bid = call for bid 招标

J

J-tube J形管
 jack 千斤顶
 jack-up rig 自升式钻井船
 jacket 导管架
 jacket cap 导管架帽
 jacket handling 导管架扶正
 jacket launching and upending 导管架下水及竖立
 jacket launching barge 导管架下水驳船
 jacket leg 导管架腿柱
 jacket leveling 导管架调平
 jacket lifted on and off the barge
 吊上及吊下驳船的导管架
 jacket lifting eye 导管架吊耳
 jacket modification 导管架改造
 jacket panel 导管架片
 jacket panel assembly 导管架片组对
 jacket positioning 导管架定位
 jacket securing 导管架固定
 jacking state 升降状态
 jacking system 升降系统
 jockey pump 供消防水干管的补给水泵

joint can 节点加厚段
 joint detail 节点详图
 junction box (explosion proof) 接线箱(防暴型)

K

killed steel 镇静钢
 kingpost 将军柱
 key plan 总图, 索引图

L

lack of fusion 未熔合
 lack of penetration 未焊透
 ladder 直梯
 ladle analysis 熔炼分析
 lamellar tearing 层状撕裂
 lap 焊缝盖面
 lap welding 搭接焊
 lateral load 侧向荷载
 launch / cargo barge 滑道式/装载式驳船
 launch way and rocker 滑道和摇臂
 launching and uprighting of a jacket
 导管架的下水和直立
 launching truss 下水桁架
 lay barge 铺管船
 lead section and subsequent
 add-ons of piles 首桩及后续状段
 leak test 密封性试验(试漏)
 leg 桩腿, 导管
 leg of a fillet weld (角焊缝)焊角高度
 level 水平仪
 level gauge (with drain) 液位仪(带排放)
 life boat 救生艇
 life boat davit, davit 吊艇架
 life buoy 救生圈
 life jacket 救生衣
 life raft, life float 救生筏
 lift calculation 吊装计算
 lifting gear 吊艇机
 lifting load 起吊荷载
 lifting lug 吊点
 lifting padeye 吊点
 lifting up of panel structure 单片起吊
 light type combustible gas 轻质可燃气体
 detector 探测器

line pipe 管线管
 line throwing apparatus 抛绳装置
 liquid trap 液体捕集器
 living quarter 生活块
 LNG carrier, LNG tanker 液体天然器运输船
 loading arm 输油臂
 loading flexible hose 柔性装载软管
 loadout and seafastening 装船固定
 local deformation 局部变形
 local stress 局部应力
 longitudinal seam/weld 纵焊缝
 low explosion limit (LEL) 爆炸下限
 low heat input 低热量输入
 low hydrogen type electrode 低氢型焊条
 low pressure scrubber 低压气净化器
 low stress round nosed die stamp 低应力圆头钢印
 lower deck 下甲板
 lub oil drain tank 润滑油排放罐
 lub oil tank with heater 润滑油罐(带加热器)
 lubricant oil transfer pump 边 润滑油传输泵
 lug 吊耳

M

machinery deck 机械甲板
 machining 机加工
 macrosection 宏观断面
 magnetic particle and suspension 磁粉和悬浮
 magnetic particle technique (MT) 磁粉探伤
 main boiler 主锅炉
 main deck 主甲板
 main generator set 主发电机组
 main process line 主要工艺管线
 main switch room 主变电间
 main transformer room 主变压器室
 make-up drawing 造管图
 manhole 人孔
 manifold 管汇
 manned platform 驻入平台
 manual /hand welding 手工焊
 manufacturer's instruction 产品使用说明
 marine growth 海生物
 marine radio system 海事通讯系统
 marine transportation 海运
 marking 做标记, 划线

marking and cutting 划线下料
 mat support jack-up rig 沉垫自升式钻井船
 material 材质, 材料
 material identification 材料标识
 material list 材料表
 material storage 材料储存
 material substitution 材料代用
 material take-off 材料估算单
 material traceability 材料跟踪
 maximum operating water depth 最大工作水深
 mean sea level (MSL) 平均海平面
 mechanical property 机械性能
 mechanical test 机械性能试验
 medium pressure separator (MP separator) 中压分离器
 member 杆件
 member drawing (杆件的)单件图
 member number 杆件号
 metacenter 稳心
 metal lash 钢板网
 mezzanine deck 夹层甲板
 middle deck 中甲板
 mild steel 低碳钢
 mill 钢厂
 mill certificate 厂家的材质证书
 mill scale 钢材出厂时的表面氧化皮
 mill sheet 制造工艺规程表
 mineral slag 矿渣
 miscellaneous items 附件
 mismatch =high-low 错皮
 mobile drilling platform /rig 移动式钻井平台
 mobile radio system 移动式无线电系统
 model test 模型试验
 module 组块
 mold 模具
 mold lofting 放样
 moment 力矩
 moment of longitudinal inclination 纵倾力矩
 moment of transverse inclination 横倾力矩
 moment of inertia 惯性矩
 mooring bit 系缆柱
 mooring cable 系泊缆绳
 mooring dolphin 系缆柱
 mooring head 系泊头

mooring template 系泊基盘
 mooring yoke 系泊钢臂
 motor operated valve 电动阀
 move to yard front 移至码头前沿
 mud mat 防沉板
 mudline 泥线
 multi-point mooring spread mooring 多浮筒系泊系统
 multi-purpose epoxy 多用途环氧漆
 multi-supported beam 连续梁
 multi-well template system 多井基盘系统
 multihead metering pump 多头计量泵
 multipass welding 多层焊
 multiple lift 多台吊车联合起吊

N

navigational light 导航灯
 NC (numerical-control) cutting machine 数控切割机
 near white metal 接近金属白色
 needle valve 针阀
 nipple 对丝
 node can 节点段
 nominal diameter 公称直径
 non-combustible 不可燃物质
 non-conformance 不一致事项
 nondestructive examination (NDE) 无损检验
 nondestructive testing (NDT) 无损检验
 NDT include :
 radiographic technique (RT) 射线探伤
 ultrasonic technique (UT) 超声波探伤
 penetrant technique (PT) 浸透检验
 magnetic particle technique (MT) 磁粉探伤
 visual inspection 外观检验
 nonskid ceramic mosaic 防滑陶瓷马赛克
 normal practice 通常作法
 normalize 正火
 normally open /close valve 常开/常闭阀
 notch toughness 缺口韧性
 NRL (Naval Research Laboratory) drop weight test
 NRL 落锤试验
 nut 螺母
O
 obsolete document 作废文件

oceanographic research vessel 海洋调查船
 offshore drilling installation 海上钻井设施
 offshore drilling rig 海上钻井装置
 offshore hook-up 海上连接
 offshore installation 海上安装
 offshore installation site 海上安装现场
 offshore oil exploration 海洋石油勘探
 offshore platform 海洋平台
 offshore structure 海洋结构物
 oil boom, oil fence 围油栅
 oil concentration (污水)含油浓度
 oil depot 油库
 oil fence reel 围油栅卷筒
 oil moisture content 油雾含量
 oil pollution 石油污染
 oil recovery vessel 污油回收船
 oil spill 溢油
 oil storage barge 储油轮
 oil storage, loading and transportation equipment 储油, 装油与输油设备
 oil treatment facility 油处理设施
 oily water tank 含油污水仓
 oily water transfer pump 污油水传送泵
 one-line diagram 单线图
 onshore fabrication 陆上预制
 open drain pump 开式排放泵
 open drain tank 开式排放罐
 open drain tank with heater 开式排放罐(带加热器)
 open firing point 明火点
 operating condition 作业条件
 operating state 作业状态
 operation draft 作业吃水
 orifice plate 孔板流量计
 original 原稿
 out of roundness 椭圆度
 outside diameter (OD) 外径
 ovality 椭圆度
 over coating intervals 复涂间隔
 over head crane 天车吊
 overboard 舷外
 overhanging beam 悬臂梁
 overhead welding 仰脸焊
 overlap 焊瘤
 overlapping joint 搭接节点

owner 业主
oxyacetylene gas welding 氧-乙炔气焊
oxyacetylene welding 氧乙炔焊
oxygen cylinder 氧气瓶
oxygen hose 氧气带

P

packaged air conditioner 空调机模块
packer 封隔器
padeye 吊点
paint brush 油刷子
paint roller 油漆滚子
painter 油漆工
panel assembling 平面组对, 单片组对
parasitic echo 干扰回声
parent steel 母材
past successful practice 以往成功的作法
pedestal crane 基座式吊机
pedestal crane 平台用吊机
peening 捶击
penetrant technique (PT) 浸透检验
perimeter 周长
periodical survey 定期检验
permissible stress 许用应力
perpendicularity of pipe end 管端垂直度
personnel protection 人身保护
phenolic paint 酚醛树脂涂料
Philips driver 十字螺丝刀
phthalic paint 苯二甲酸涂料
pig launcher 清管器发射器
pig receiver 清管接收器
pile cap 桩帽
pile driving records 打桩记录
pile driving refusal 拒捶点
pile extracting 拔桩
pile foundation 桩基
pile guide 桩导向
pile penetration 桩的贯入度
pile section /segment 桩段
pile sleeve 桩套筒
pile spacer 扶桩间隙块
pile washing out 冲桩
piling 打桩
piling barge 打桩船

pilot house 驾驶室
pinhole 针尖状气孔
pipe diameter 管径
pipe fitting 管件
pipe rack 管子托架
pipe shop 管子支撑
pipe wrench 管钳
pipeline 管线, 管道
pipeline laying barge 铺管船
piping and instrument diagram (P&ID) 管线仪表图
plain end 无螺纹管端
plan 平面图, 布置图
plasma arc cutting (PAC) 等离子弧切割
plasma arc welding (PAW) 等离子弧焊接
plate girder 板梁
plate type heat exchanger 板式换热器
platform 平台
platform positioning on the site 导管架的现场定位
platform-to-shore radio system 平台-海岸无线电系统
pliers 钳子
plug 丝堵
plug valve 旋塞阀
plummet 铅坠
plus or minus 2 正负 2
pneumatic binary signal 双向气动信号
pneumatic lines 气控管线
pneumatic operated valve 气动操作阀
pneumatic operated with manual reset valve 手动复位气动阀
pneumatic test 气压试验
polarization potential (阳极的)极化电位
polarized steel 极化铁
polyurethane paint 聚氨酯涂料
porosity 密集气孔
port hole 舷窗
portable extinguisher 手提式灭火器
portable two-way radio 双向无线电话
positioner 定位器
positioning 定位
positive displacement flow meter 容积式流量计
positive flow meter 正位流量计
postweld head treatment 焊后热处理

pot life (油漆的)混合期效
 power wire brush 电动钢丝刷
 preheat temperature 预热温度
 preheater 预热器
 pressure differential flow meter 差压流量计
 pressure gauge 压力表
 pressure regulation valve 压力调节阀
 pressure regulator
 (external tap) 压力调节阀(阀外引压)
 pressure relief valve 压力释放阀
 pressure safety valve 压力安全阀
 pressure vessels 压力容器
 primary structural member 主结构杆
 probe 探头
 procedure qualification record (PQR) 焊接工艺
 评定
 process 工序
 port 左舷
 process module 工艺模块
 product identification and traceability 产品标识
 和跟踪
 production manifold 生产管汇
 production platform 生产平台
 production process and equipment 生产工艺及设备
 production shutdown panel (PSDP) 应急系统关
 断盘
 production welding 生产性焊接
 professional skill 专业技能
 protractor 量角器
 provision 条款, 规定, 措施
 punch marks 冲眼
 punching shear 冲剪应力
 purchase 采购
 purchase order number 订货合同号
 purge / pilot gas package 状吹扫/引燃器撬块
 process drain 工艺排放

Q

quality system 质量体系
 quality assurance 质量保证
 quality audit 质量审核
 quality awareness 质量意识
 quality check in process 工作中自检
 quality control (QC) 质量控制

quality evaluation 质量评估
 quality loop 质量环
 quality manual 质量手册
 quality objectives 质量目标
 quality plan 质量计划
 quality planning 质量策划
 quality policy 质量方针
 quality related costs 质量成本
 quality review / assessment 质量评审
 quality surveillance 质量监督
 quasi-static loading 准静力荷载
 quay 码头
 quenched and tempered steel 淬火加回火钢
 quick coupling 快接管箍
 quick release hook (QRH) 快速解脱钩
 quiver 焊条筒

R

A resulting from B 由 B 导致 A
 radial offset of abutting edges of
 longitudinal weld seam 纵缝对接口径向错皮
 radio equipment 无线电设备
 radio positioning system 无线电定位系统
 radiographic examination 射线检验
 radiographic interpretation 射线探伤的评片
 radiographic technique (RT) 射线探伤
 radius of operation 作业半径
 receipt and storage of material 材料的接受和储存
 receipt to / dispatch from a warehouse 入/出库
 receiving inspection 到货检验
 reciprocating pump 往复泵
 recommended practice 推荐作法
 recovered oil tank 回收油罐
 red lead 红丹
 reducer 大小头, 变径头
 reducer concentric 同心大小头
 reducer eccentric 偏心大小头
 refinery / petrochemical works 炼油/石化厂
 reinforcement 加强筋
 rejected or scrapped 拒收或报废
 relative humidity 相对湿度
 relaxation of rejection criteria 拒收标准的放宽
 release = issue = distribution 文件的发放
 removable hatch 活动舱盖

self tapping screw	自攻螺丝	silver /silver Chloride (Ag / Ag Cl)	
self weight	自重	reference cell	银/氯化银参比电池
self-contained pressure regulator	自给式压力调节阀	simple beam	简支梁
self-elevating drilling platform	自升式钻井船	simple joint	简单节点
self-inspection	自检	simply supported beam	简支梁
self-shielded welding	自保护焊	single anchor leg mooring (SALM)	单锚腿系泊
semi-automatic welding	半自动焊	single berth with chest and drawers	有柜和抽屉的单人床
semifinished / intermediate product	半成品	single buoy mooring (SBM)	单点系泊
semisub drilling unit	半潜式钻井装置	single groove	单面坡口
semisubmersible rig	半潜式钻井船	single point mooring (SPM)	单点系泊
separator	分离器	single V groove	单面 V 形坡口
separator / surge vessel	分离/缓冲器	sit-on bottom stability	坐底稳性
serrated	锯齿形	site assembly	空间组装, 现场组装
service after sales	售后服务	site installed	现场安装
sewage treatment unit	生活污水处理装置	site representative	驻厂代表
sewage unit	排污罐	sitting on the sea bed	坐底
shackle	卡环, 卸扣	skidded loadout	滑道式装船
shall	必须(强制性的)	skidway	滑道
试比较:		skip weld	跳焊
should	应该, 最好, 宜(建议性的)	skirt pile	群桩
may	可以(任意性的)	skirt plate	群板
will	表明说话人的意志, 一般为业主行为, 而非承包商行为	skirt sleeve	群桩套筒
shape cutting	仿形切割	slag	熔渣
shape steel	型钢	slag catcher	捕集器
shear stress	剪切应力	slag inclusion	夹渣
sheet pile	钢板桩	slag removal	清渣
sheet piling	板桩	slate pencil	石笔
shelf life	油漆的储存期限	slide door	滑动门
shielded metal arc		slide down the launch way	沿滑道滑动
welding (SMAW)	手工电弧焊	slide shop = launch cradle	滑靴
shim plate	间隙条, 导向块	sling	吊索
shop design	加工设计	slip way	滑轨
shop drawing	车间加工图	slop tank	污油罐
shop primer	车间底漆	slope	坡度
shot blast	喷丸除锈	slot welding	槽焊
shower bath	淋浴器	slotted member	开槽杆件
shrinkage strains	收缩应变	smoke detector	烟雾探测器
shutdown switch	关断开关	smooth transition	平滑过渡
shutdown valve	关断阀	socket type	插焊式
shuttle tanker	穿梭油轮	socket weld flange	插焊法兰
side bend test	侧弯试验	sockolet	插焊管座
silencer	消音器	soft yoke mooring system	柔性刚臂系泊系统
		solenoid valve	电磁阀

sound area, area free from defect	无缺陷区	stool	圆凳
space assembling	空间组对	storage area	储存场地
spacer	间隙块	storage platform	储存平台
spanner	扳手	straightening	调直
spark arrester	避雷器	straightness	弯曲度
splatter	焊接飞溅	strain	应变
specification	规格书, 规范	strain gage	应变仪
specified requirement	规定的要求	stress concentration	应力集中
specimen	试件	stress concentration factor	应力集中系数
spherical joint	环形节点	stress relief	应力释放
spilled oil recovery	溢油回收	stripping pump	扫舱泵
spiral welded pipe	螺旋焊管	strong back	临时加强板
splash zone	飞溅区	structural component	结构杆件
splice	拼接	structural integrity	结构的整体性
spot check	抽检	structural steel	结构钢
spray coating	喷漆	structural strength	结构强度
spring bar	撑杆	stub	短粗管
spring line	粉线, 墨斗线	stubbing cone	插尖
spring washer	弹簧垫片	stud bolt	双头螺栓
spud	桩脚	stud pin	保温钉
square	直脚尺	sub-standard specimen	小试件
square bar	方钢	submarine pipeline / cable laying	海底管线/电缆铺设
squareness of pipe end	管端垂直度	submerged arc welding (SAW)	埋弧自动焊
stabbing cone	插尖	submersible rig	坐底式钻井船
stair (试比较 ladder 直梯)	斜梯	submit to = present to = forward to = hand in	提交
stair treads	梯子踏步	subsea cementing equipment	水下固井设备
stand off slender anode	支架式细长阳极	subsea pipeline	海底管线
stand-by boat	值班船	subsea template	海底基盘
stand-by power station	备用电站	subsea wellhead	海底井口
standard test block	标准试块	substitution of A with B	以 B 代替 A
starboard	右舷	substructure	下部结构
static / dynamic load	静, 动载	subsurface safety valve (SSSV)	井下安全阀
static electricity discharge	静电释放	suction anchor	吸力锚
static electricity earth	静电接地	suction filter	吸入口滤器
steam boiler	蒸汽锅炉	superintendent	总监
steam distribution system	蒸汽分配系统	superstructure	上部结构
steam radiator	蒸汽散热器	supervisor	监督
steel ruler	板尺	supplier	供方. (签合同后, 供方变合同供方)
steel tape	钢卷尺, 盘尺	试比较:	
steel wire shot	(抛丸用的)钢丝	contractor (合同供方)	
stenciled marks	漏字板喷漆字	supply boat	供应船
stern	船艉	surface preparation	表面处理
stick to	遵守	surface safety valve (SSV)	地面安全阀
stiffener	筋板		

surface welding 水上焊接
surge vessel 缓冲罐
susceptibility to passivation 钝化敏感度
swage nipple 变径头
swivel assembly 旋转头总成
swivel chair 转椅
swivel stool 圆转凳

T

"T" steel T型钢
4:1 tapered transition bevel 四比一过渡坡口
T-square 丁字尺
tab plate 引, 熄弧板的总称
tack welding 点焊
tacker 点焊工
tandem loading system 串靠装油系统
tandem mooring 串靠系泊
tank (方形无压)罐
试比较 vessel (非方形有压)罐
tank and loading shutdown
panel (TLSDP) 储罐-外输关系关断盘
tank mixer 搅拌器
TEE 三通
temperature controller (TC) 温度控制器
template 样板
template type platform 导管架型平台
temporary/permanent attachment 临时/永久附件
tender ship 钻井辅助船
tensile hoop stress 周向拉应力
tensile strength 抗拉强度
tension leg platform (TLP) 张力腿平台
tension / compression member 拉/压杆
tensioner 张紧器
test crude header 原油计量总管
test crude heater 原油计量加热器
test piece 试件, 即用于试验的焊件
test separator shutdown panel (TSDP) 计量分离
器关断盘
test specimen 试样, 即从试件上切
取供试验用的样品
thermal insulation 保温
thermal spraying 热喷涂
thermocouple 热电偶
thermometer 温度表

thickness of root face 钝边高度
thinner 稀料
threaded one end (TOE) 一头管端带螺纹
threadolet 丝扣管座
three phase arc welding 三相电弧焊
three phase separator 三相分离器
three way valve 三通阀
through drying time 油漆的干透时间
through member 贯通杆件
through-thickness direction 厚度方向
thrust 轴向荷载
tidal variations 潮汐变化, 潮差
tidal zone 潮差段
timber 木料
toe board 踢脚板
tolerance 公差
tool box 工具箱
top coat 面漆
top /middle lower cellar deck 顶/中/下/底甲板
topside /upper structure 上部结构
torque 扭矩
TOS (top of structure) 结构顶部
total attenuation 衰减度
total enclosed fire 全封闭耐火
protected lifeboat 救生艇
touch drying time 油漆的触干时间
toughness 韧性
tower-type platform 塔式平台
towing state 拖航状态
towing vessel, tug boat 拖轮
towing /anchor handling /supply vessel 拖航,
抛锚, 供应三用工作船
trailer 拖板
trailer puller 拖车车头
transition piece 过渡段
transition slope 过渡坡口
transition taper 过渡坡口
transport vessel for jackets 导管架的运输船
transverse direction 横向
treated water tank 净化水罐
trial fit-up 试装
triplicate 一式三份
trouble shooting 故障巡查
truck crane 汽车吊

truss 桁架
tubular 管材
tubular joint 管节点
tubular member 管件
tug boat 拖轮
tundish 漏斗

Tungsten inert gas welding 钨极惰性气体
保护焊(氩弧焊)
turbine primary element 涡轮流量计
two kinds media filter package 双介质过滤器
T, K, and Y joints T, K, Y 型节点

U

U-bolt U 形螺栓
Ultra-violet detector (UV detector) 紫外线探测器
ultrasonic examination 超声波检验
ultrasonic technique (UT) 超声波探伤
ultrasonic thickness meter 超声波测厚仪
uncoated steel 裸钢, 无涂层钢
under water welding 水下焊接
undercut 咬边
underground water surge tank 地下水缓冲罐
underwater oil storage tank 水下储油罐
underwater welding 水下焊接
unequal angle 不等边角钢
uninterrupted power supply (UPS) 不间断电源
union 由任, 活接头
unless otherwise specified 除非另外说明
unmanned platform 无人平台
UNO (unless noted otherwise) 除非另外说明
UO welded pipe 用 UO 法卷成的钢管
Upon contract award 合同签字后
upper middle /lower deck framing 上, 中, 下甲板梁格
utility air receiver 公用空气接受器
utility drain 公用设施排放
utility module 公用设施模块
vernier caliper 游标卡尺

V

vacuum breaker valve 真空阀
vent pipe 放空管
verification 验证(即检查是否合格)
vertical welding 立焊

vessel (非方形有压)罐
Vickers hardness 维氏硬度
visual inspection 外观检验
vortex breaker 涡流消除器

W

walk way 走道
wall offset (对接)错皮
wall skeleton 墙皮骨架
wall thickness (WT) 壁厚
walnut filter package 核桃壳过滤器
warehouse /stock room 库房
warm formed pipe 热卷管
warpage / warping 翘曲变形
washer 垫片
waste heat recovery unit 废热回收装置
waste oil tank 废油罐
waste water disposal well 废水处理井
water expansion tank 水膨胀罐
water injection coarse /fine
filtration package 注水粗/细过滤器模块
water injection jacket 注水导管架
water moisture content 水汽含量
water seal 水封
water spray nozzle 喷淋水嘴
water tightness 水密性
watertight door 水密门
weather deck, open deck 露天甲板
weather resistance 耐风化性
web 腹板
wedge 楔子
weld 焊缝
weld leg 焊脚高度
weld metal 焊接金属, 焊肉
weld number 焊接号
weld profile 焊接外形
weld reinforcement 焊缝加强高, 余高
weld seam fit-up 焊缝组对
weld toe 焊趾(焊缝表面与母材的交接处)
weldability 可焊性
welded pipe 焊管, 有缝管
welder 焊工
welder performance qualification test 焊工技能
考试

welding 焊接
welding cable 电焊把线
welding consumable 焊接耗材
welding deformation 焊接变形
welding details 焊接详图
welding flux 焊剂
welding gloves 焊工手套
welding goggles 气焊眼镜, 焊工护目镜
welding gun 焊枪
welding machine 焊机
welding neck flange 焊接带径法兰
welding operator 焊接操作员(如自动焊工等)
welding platen 组焊平台
welding position 焊接位置
常见的焊接位置有:
flat position / downhand welding 平焊
horizontal position welding 横焊
overhead position welding 仰脸焊
vertical position welding 立焊
welding procedure 焊接程序
welding procedure qualification 焊接程序评定
records (WPQR) 试验报告
welding procedure qualification test 焊接程序评定试验
welding procedure specification (WPS) 焊接程序
welding process 焊接方法

常用的焊接方法包括:

gas metal arc welding (GMAW) 熔化极气体保护焊
gas tungsten arc welding (GTAW)
钨极气体保护焊(含氩弧焊)
shielded metal arc welding (SMAW) 手工电弧焊
submerged arc welding (SAW) 埋弧自动焊
welding spats 焊工护脚, 脚盖
welding spatters 焊接飞溅

welding stress 焊接应力
welding supervisor 焊接监督
welding symbol 焊接符号
welding wire / rod 焊丝
welding with backing 衬垫焊
weldment 焊件
weldolet 对焊管座
well killing pump 压井泵
well service tank 修井液罐
wellhead 井口
wellhead manifold 井口管汇
wellhead module 井口模块
wellhead platform (WHP) 井口平台
wet method underwater welding 湿式水下焊
wet-type automatic sprinkler system 湿式自动
喷洒灭火系统
wheeled extinguisher 推车式灭火器
whichever is less 取较小值
winch 绞车
wind shield 防风墙
witness point 见证点
working point 工作点
working ratio 开工率
workover module 修井模块
wormhole 条虫状气孔
written approval 书面批准

Y

yield strength 屈服点, 屈服强度
yield point 屈服点, 屈服强度
yoke (单点系泊的)油克
y-type tee Y型三通

Z

Z direction property Z向特性
Zinc rich epoxy primer 环氧富锌底漆

附录 1: 各国标准名录

1 各国标准代号索引

AB 美国船级协会标准
AISI 美国钢铁学会标准
ANSI 美国国家标准学会标准
AREA 美国铁路工程协会标准
ASME 美国机械工程师学会标准

AFNOR 法国标准化协会标准
AMS 美国宇航材料标准
API 美国石油学会标准
AS 澳大利亚标准
ASTM 美国材料试验学会标准

AWS	美国焊接协会标准	AWWA	美国水道协会标准
BS	英国标准	BV	法国船级标准
CSA	加拿大标准协会标准	DIN	联邦德国工业标准
DTD	英国航空材料标准	DVM	联邦德国材料试验协会标准
GB	中国国家标准	GL	联邦德国劳埃德船级标准
ISO	国际标准化组织(国际标准)	JASO	日本自动车工业学会标准
JIS	日本工业标准	JPI	日本石油学会标准
JRS	日本国营铁路标准	JWWA	日本水道协会标准
KR	韩国船级标准	LR	英国船级标准
NDS	日本防卫厅标准	NF	法国标准
NK	日本海事协会标准	NV	挪威船级标准
SAE	美国汽车工程学会标准	UIC	国际铁路联盟标准
UNS	美国金属与合金统一编号系统	WES	日本焊接协会标准
WSP	日本水道钢管协会标准	OCT (GOST)	(苏联)国定全苏标准

2 各国标准缩写全称

ABS:	American Bureau of shipping (美国船级社)
ACI:	American Concrete Institute (美国混凝土学会)
AIEE:	American Institute of Electrical Engineers (美国电气工程师学会)
AISC:	American Institute of steel Construction ((美国钢结构建造学会)
ANSI:	American National Standard Institute (美国国家标准学会)
API:	American Petroleum Institute (美国石油学会)
ASCE:	American Society of Civil Engineers (美国土木工程师学会)
ASME:	American Society of Mechanical Engineers (美国机械工程师学会)
ASTM:	American Society for Testing and Materials (美国材料及试验协会)
AWS:	American Welding Society (美国焊接协会)
BS:	British Standards (英国标准)
DnV:	Det Norske Veritas (挪威船级社)
EIA:	Electronic Industries Association (电气工业协会)
IADC:	International Association of Drilling Contractors (国际钻井承包商协会)
IEC:	International Electric Commission (国际电气委员会)
IEEE:	Institute of Electrical and Electronics Engineers (电气及电子工程师学会)
ISO:	International Standardization Organization (国际标准化组织)
JIS:	Japanese Industry Standard (日本工业标准)
LR:	Lloyd's Register of Shipping (劳氏船级社)
NACE:	National Association of Corrosion Engineers (美国腐蚀工程师协会)
NEMA:	National Electrical Manufacturers Association (美国电气制造商协会)
NF:	Normes francaises (法国标准)
NFPA:	National Fire Protection Association (美国消防协会)
OTC:	Offshore Technology Conference (近海技术会议)
SAMA:	Scientific Apparatus Makers Association (科研仪器制造商协会)
SIS:	Swedish (瑞典标准)
SSPC:	Steel Structural Painting Council (美国钢结构油漆委员会)

- ISO9001: Quality systems—model for quality assurance in design /development, production, installation and servicing (质量体系——设计 / 开发, 生产, 安装和服务的质量保证模式)
- ISO9002: Quality systems—model for quality assurance in production and installation (质量体系——生产和安装的质量保证模式)
- ISO9003: Quality systems—model for quality assurance in final inspection and test (质量体系——最终检验和试验的质量保证模式)
- ISO9004: Quality management and quality system elements-- Guidelines (质量管理和质量体系要素指南)

附录 2: 企业英文名录

中国海洋石油总公司 China National Offshore Oil Corporation (CNOOC)

1 总公司下属部分公司名录

中海石油渤海公司 China Offshore Oil Bohai Corporation

中海石油南海西部公司 China Offshore Oil Nanhai West Corporation

中海石油南海东部公司 China Offshore Oil Nanhai East Corporation

中海石油东海公司 China Offshore Oil Donghai Corporation

中海石油平台制造公司 China Offshore Oil Platform Fabrication Company

中海石油工程设计公司 China Offshore Oil Development & Engineering Corporation

中海石油海上工程公司 China Offshore Oil Marine Engineering Company

中海石油勘探开发研究中心(高碑店) China Offshore Oil Exploration & Development Research Center

中海天然气利用公司 China Offshore Gas Utilization Corporation

中海石油测井公司 China Offshore Oil Logging Company

中海石油会计审计公司 China Offshore Oil Accounting & Audit Company

中海石油油气销售公司 China Offshore Oil Marketing Company

中海石油财务公司 China Offshore Oil Financing Company

中海石油国际工程公司 China Offshore Oil International Engineering Company

中海石油地球物理勘探公司 China Offshore Oil Geophysical Company

中海石油技术服务公司 Petrotech Services. CNOOC

中海石油北方船舶公司 China Offshore Oil Northern Shipping Company

中海石油南方船舶公司 China Offshore Oil Southern Shipping Company

中海石油北方钻井公司 China Offshore Oil Northern Drilling Company

中海石油南方钻井公司 China Offshore Oil Southern Drilling Company

中海石油生产研究中心(在燕郊) China Offshore Oil Production Research Center

汇海实业有限公司 Hui Hai Enterprise Co., Ltd.

海外石油天然气有限公司 Overseas Oil and Gas Corporation, Ltd.

中国海洋石油报社 China Offshore Oil Press

中海华东能源有限公司 China Offshore Oil Huadong Energy Corp.

2 渤海公司部分二级公司名录

渤海石油采油公司 Bohai Oil Production Company

渤海石油研究院 Bohai Oil Research Institute

渤海石油物资供应公司 Bohai Oil Material Supply Company

渤海石油通讯服务公司 Bohai Oil Communication Company

3 平台公司各职能部门名录

品质管理部 Quality Assurance Department
 办公室 Administration Office
 经营市场部 Business and Marketing Department
 生产部 Production Department
 计划财务部 Planning and Accounting Department
 技安保卫部 Safety Department
 人事劳资部 Personnel Department
 设计中心 Design Center
 无损检验公司 Quality Control Department
 供应公司 Purchasing Subcompany
 结构公司 Structure Subcompany
 模块公司 Module Subcompany
 容器公司 Vessel Subcompany
 服务公司 Service Subcompany
 舾装公司 Outfitting Subcompany
 赤弯合营公司(赤弯胜宝旺工程有限公司) Chiwan Sembawang Engineering Company Ltd.

4 其他有关公司, 部门名录

渤海工程部 Development Engineering Department of Bohai Corporation
 日中石油开发株式会社 Japan-China Oil Development Corporation(JCODOC)
 (深圳)南山开发公司 China Nanshan Development Co. Ltd.
 蛇口工业区 Shekou Industrial Zone
 中国船级社 China Classification Society
 中国船检 Register of shipping of PRC
 中国船舶工业总公司 China State Shipbuilding Corporation(CSSC)
 天津造船工业公司 Tianjin Shipbuilding Industry Company
 新港船厂 Xingang Shipyard
 渤海胜宝旺船厂 Bohai Sembawang Shipyard (Tianjin) Co. LTD
 中国石油化工总公司 China Petrochemical Corporation
 中国石油天然气总公司 China National Petroleum Corporation
 大庆石油管理局 Daqing Petroleum Administration Bureau
 大港油田集团有限责任公司 Dagang Oilfield Group Limited Company
 阿莫科东方石油公司 AMOCO Orient Petroleum Company
 阿科中国有限公司 Arco China Ltd.
 雪佛龙海外石油有限公司 CHEVRON Overseas Petroleum Limited
 克里斯通能源公司 CRESTONE Energy Corporation
 埃尔夫石油中国公司 ELF Hydrocarbures China
 埃索中国石油上游有限公司 ESSO China Upstream Limited
 科麦奇中国石油有限公司 Kerr-McGee China Petroleum Ltd.
 美孚石油公司 Mobil Corporation
 菲利普中国有限公司 Phillips China Incorporated
 菲利普石油国际亚洲公司 Phillips Petroleum International Corporation Asia
 新加坡胜宝旺公司 Sembawang Engineering (PTE) Co. Ltd.

壳牌勘探(中国)有限公司 SHELL Exploration (China) Limited

挪威国家石油东方有限公司 STATOIL (Orient) Inc.

德士古中国公司 TEXACO China, Inc. B. V.

赛敦中国有限公司 TRITON China, Inc., LLC

5 日本六大钢铁公司名录

新日本制铁公司 (NSC)

日本钢管公司 (NKK)

川崎制铁公司 (KSC)

住友金属工业公司 (SM)

神户制钢公司 (KOBE)

日新制钢公司 (NS)

附录 3: 常用数据及公式

一 常用换算单位

1 in = 25.4 mm

1 ft = 12 in = 304.8 mm

1 barrel (石油桶) = 158 公升

1 bar = 14.504 psi (磅 / 平方英寸) = 1.02 kg/cm²

1 ksi (千磅 / 平方英寸) = 70.37 kg/cm²

1 J = 1 牛米

1 Pa = 1 牛 / 平方米

1 lb = 0.454 kg

1 MPa = 0.10197 kg/mm² = 10.197 kg/cm²

1 Y (yard 码) = 3 ft = 914.4 mm

1 lb-ft = 1.3558 J

1 MT (公吨) = 1000 kg

1 LT (长吨) = 2240 lb = 1016 kg

1 ST (短吨) = 2000 lb = 907.2 kg

二 常用公式及常数

1 华氏度(F) 与摄氏度(C)的转换:

$C = (F - 32) \times 5/9$

$F = 32 + (C \times 1.8)$

2 圆台侧面积 $S = \pi (R_1 + R_2) L$

其中 (R_1, R_2 为上下圆半径, L 为母线长)

3 钢管单重(kg/m): $W_p = 0.02466 t (D - t)$

其中(t 为壁厚 mm, D 为外径 mm)

4 钢板单重(kg/m²): $W_{pl} = 7.85 t$

其中(t 为板厚 mm)

5 钢铁比重: 7.85

三 标准工程图纸尺寸 (长 X 宽 X 两个装订边):

A0 号图: 1189X841X25X10

A1 号图: 841X594X25X10

A2 号图: 594X420X25X10

A3 号图: 420X297X25X5

A4 号图: 297X210X25X5

附录 4 加工设计常用英语

Head mark of member numbers of the drawing to be... 本图杆件号字头为...

Member numbers of the drawing to be from ...to... 本图杆件号自...至...

Material of plates to be... 所有板材材质为...

For general notes refer to drawing No.001. 总说明参见 001 号图

All members not labeled to be H250X125. 所有未标注规格的杆件为 H250X125.

All elevations and dimensions are in millimeters. 所有标高及尺寸均以毫米计.

All elevations are relative to chart datum. 所有标高均相对于海图基准面.

All deck elevations are on the top of structural beams. 所有甲板标高线均指结构梁顶线.

All welds shall be full penetration and continuous unless otherwise specified on the drawing.

除非图上另外标明, 所有焊缝均为连续全焊透焊接。

Both single and double fillet welds shall be as follows unless otherwise shown on the drawings.

除非图上另外标明, 所有单, 双面贴角焊缝高度如下。

Material properties and specifications of the pipes, shapes and plates are determined as follows unless otherwise noted.

除非另外标注, 本图所用的管材, 型材及板材的材质规格如下。

The longitudinal welds shall be staggered by a minimum of 90 degrees.

纵缝间须至少错开 90 度。

The shaded part will be installed offshore. 阴影部分将在海上安装。

附录 5 平台建造各专业名称

1 specialty names 专业名称

process (PR) 工艺

drilling (DR) 钻井工艺

safety (SA) 安全

piping (PI) 配管

structure (ST) 结构

subsea pipeline (SP) 海底管线

electricity (EL) 电气

instrument (IN) 仪表

machinery (MA) 机械

communication (CO) 通讯

outfitting (OU) 舾装

corrosion control (CO) 防腐

environment impact assessment (EA) 环境影响评价

economic (EC) 经济

general (GE) 总体

2 design phases 设计阶段名称

feasibility 可行性研究 (包括概念设计)

conceptual 概念设计

basic design 基本设计

detail design 详细设计

fabrication design 加工设计

DWG: drawing 图纸

FI: filed 油气田

FPS: floating production and storage unit 浮式生产储油装置

FSU: floating storage unit 浮式储油装置

GTP: gas treating plant 天然气处理厂

MEL: material and

equipment list 材料及设备清单

PA: pilot area 试验区

PP: pressurizing platform 增压平台

PRP: production platform 生产平台

PSP: production/ storage

platform 生产储罐平台

PWP: power platform 动力平台

RPT: report 报告

S/C: subsea cable 海底电缆

S/F: subsea flowline 海底出油管

S/G: subsea gasline 海底输气管线

S/L: subsea pipeline 海底管线

S/O: subsea oilline 海底输油管线

S/W: subsea waterline 海底输水管线

SA: satellite area 卫星区

SBL: standard symbol list 标准符号表

SKT: sketch 设计草图

SLP: storage/ loading platform 储罐平台

SPC: specification 规格书

SPM: single point mooring 单点系泊

STD: standard drawing 标准图

SWH: subsea wellhead 水下井口

WHP: wellhead platform 井口平台

WIP: water injection platform 注水平台

approx: approximate 大约

AFC: approved for construction 批准建造

附录 6 常用缩写词

AI: artificial island 人工岛

APP: accommodation/power

platform 生活动力平台

CAL: calculation 计算书

CEP: central platform 中心平台

DDS: detailed data sheet 数据表

DPP: drilling/production platform 钻采平台

DRP: drilling platform 钻井平台

C/W: complete with 配有	SPEC: specification 规格或规格书
CDL: chart datum level 海图基准水位	SQ: square 平方
CH: checkered plate 花纹钢板	STIFF: stiffener 加强筋
CL: center line 中心线	SUP'T: support 支架
COG: center of gravity 重心	SWL: safe working load 安全工作荷载
DET: detail 详图	THK: thickness 厚度
DIA: diameter 直径	TOS: top of structure 结构顶面
DO: ditto 同上	TYP: typical 典型的
DWG: drawing 图纸	U/S: under side 底侧
EHWL: extreme high water level 极端高水位	UNO: unless noted otherwise 除非另有说明
EL: elevation 标高	WP: work point 工作点
ELWL: extreme low water level 极端低水位	WT: wall thickness 壁厚
FB: flat bar 扁钢	
FIG: figure 图	
FRMG: framing 构架	
FS: far side 背面	
GALV: galvanized 镀锌	
HAT: highest astronomical tide 最高天文潮	
HWL: high water level 高水位	
ID: inside diameter 内径	
IR: inside radius 内半径	
LAT: lowest astronomical tide 最低天文潮	
LG: length 长度	
LWL: low water level 低水位	
MAT'L: material 材料	
MAX: maximum 最大值	
MIN: minimum 最小值	
ML: mud line 泥面	
MSL: mean sea level 平均海平面	
MTO: material take-off 材料估算单	
NO: number 数量, 号码	
NS: near side 可见侧	
NTS: note to scale 未按比例	
OD: outside diameter 外径	
OPP: opposite 对侧	
PCS: pieces 件	
PL: plate 板	
PSF: pounds per square foot 磅每平方英尺	
REF: reference 参考	
REQ'D: required 需要	
REV: revision 修改	
SEC: section 断面	

USEFUL CONVERSION DATA

VOLUME

from	to	cm ³	liter	m ³	in. ³	ft ³	yd ³	fl oz	fl pt	fl qt	gal	gal (Br.)	bbl (oil)	bbl (liq)
cm ³	1	0.001	1x10 ⁻⁶	0.06102	3.53x10 ⁻⁵	1.31x10 ⁻⁶	0.03381	0.00211	0.00106	2.64x10 ⁻⁴	2.20x10 ⁻⁴	6.29x10 ⁻⁴	8.39x10 ⁻⁴	
liter	1000	1	0.001	61.02	0.03532	0.00131	33.81	2.113	1.057	0.2642	0.2200	0.00629	0.00839	
m ³	1x10 ⁶	1000	1	6.10x10 ⁴	35.31	1.308	3.38x10 ⁴	2113	1057	264.2	220.0	6.290	8.386	
in. ³	16.39	0.01639	1.64x10 ⁻⁵	1	5.79x10 ⁻⁴	2.14x10 ⁻⁵	0.5541	0.03463	0.01732	0.00433	0.00360	1.03x10 ⁻⁴	1.37x10 ⁻⁴	
ft ³	2.83x10 ⁴	28.32	0.02832	1728	1	0.03704	957.5	59.84	29.92	7.481	6.229	0.1781	0.2375	
yd ³	7.65x10 ⁵	764.5	0.7646	4.67x10 ⁴	27	1	2.59x10 ⁴	1616	807.9	202.0	168.2	4.809	6.412	
fl oz	29.57	0.02957	2.96x10 ⁻⁵	1.805	0.00104	3.87x10 ⁻⁵	1	0.06250	0.03125	0.00781	0.00651	1.86x10 ⁻⁴	2.48x10 ⁻⁴	
fl pt	473.2	0.4732	4.73x10 ⁻⁴	28.88	0.01671	6.19x10 ⁻⁴	16	1	0.5000	0.1250	0.1041	0.00298	0.00397	
fl qt	946.4	0.9463	9.46x10 ⁻⁴	57.75	0.03342	0.00124	32	2	1	0.2500	0.2082	0.00595	0.00794	
gal	3785	3.785	0.00379	231.0	0.1337	0.00495	128	8	4	1	0.8327	0.02381	0.03175	
gal (Br.)	4546	4.546	0.00455	277.4	0.1605	0.00595	153.7	9.608	4.804	1.201	1	0.02859	0.03813	
bbl (oil)	1.59x10 ⁵	159.0	0.1590	9702	5.615	0.2079	5376	336	168	42	34.97	1	1.333	
bbl (liq)	1.19x10 ⁵	119.2	0.1192	7299	4.211	0.1560	4032	252	126	31.5	26.23	0.7500	1	

1 cord = 128 ft³ = 3.625 m³

AREA

from	to	cm ²	m ²	km ²	in. ²	ft ²	mile ²
cm ²	1	0.0001	1x10 ⁻¹⁰	0.1550	0.00108	3.86x10 ⁻¹¹	
m ²	1x10 ⁴	1	1x10 ⁻⁶	1550	10.76	3.86x10 ⁻⁷	
km ²	1x10 ¹⁰	1x10 ⁴	1	1.55x10 ⁹	1.08x10 ⁷	0.3861	
in. ²	6.452	6.45x10 ⁻⁴	6.45x10 ⁻¹⁰	1	0.00694	2.49x10 ⁻¹⁰	
ft ²	929.0	0.09290	9.29x10 ⁻⁸	144	1	3.59x10 ⁻⁸	
mile ²	2.59x10 ¹⁰	2.59x10 ⁴	2.590	4.01x10 ⁹	2.79x10 ⁷	1	

FLOW RATE

from	to	lit/sec	gal/min	ft ³ /sec	ft ³ /min	bbl/hr	bbl/day
lit/sec	1	15.85	0.03532	2.119	22.66	543.8	
gal/min	0.06309	1	0.00223	0.1337	1.429	34.30	
ft ³ /sec	28.32	448.8	1	60	641.1	1.54x10 ⁴	
ft ³ /min	0.4719	7.481	0.01667	1	10.69	256.5	
bbl/hr	0.04415	0.6997	0.00156	0.09359	1	24	
bbl/day	0.00184	0.02917	6.50x10 ⁻⁵	0.00390	0.04167	1	

bbl refers to bbl oil = 42 gallons

PRESSURE CONVERSIONS

from	to	mm Hg	inHg	inH ₂ O	ft.H ₂ O	atm	psi lb/in ²	Kg/cm ²	kPa	BAR
mm Hg	1.	.03937	.5353	.0461	.00132	.01934	.00136	.1333	.0013	
in. Hg	25.40	1.	13.60	1.133	.03342	.4912	.03453	3.387	.0339	
in. H ₂ O	1.868	.07355	1.	.08333	.00246	.03612	.00254	.2490	.0025	
ft. H ₂ O	22.42	.8826	12.	1.	.02950	.4334	.03048	2.988	.0299	
atm	760.	29.92	406.8	33.90	1.	14.70	1.033	101.3	1.013	
lb/in. ²	51.71	2.036	27.69	2.307	.05805	1.	.07031	6.895	.0689	
kg/cm ²	735.6	28.96	393.7	32.81	.9678	14.22	1.	98.05	.981	
kPa	7.500	.2953	4.016	.3347	.00987	.1451	.0102	1.	.01	
Bar	750.	29.53	401.6	33.47	.987	14.51	1.02	100.	1	

1 Bar = 1 x 10⁶ dynes/cm² = 0.98692 atm = 14.5 psi = 100 kPa

TEMPERATURE CONVERSION TABLE

°C	°F	°C	°F	°C	°F	°C	°F
-200	-328	25	77	240	464	540	1004
-180	-292	30	86	250	482	550	1022
-160	-256	35	95	260	500	560	1040
-140	-220	40	104	270	518	570	1058
-120	-184	45	113	280	536	580	1076
-100	-148	50	122	290	554	590	1094
-95	-139	55	131	300	572	600	1112
-90	-130	60	140	310	590	610	1130
-85	-121	65	149	320	608	620	1148
-80	-112	70	158	330	626	630	1166
-75	-103	75	167	340	644	640	1184
-70	-94	80	176	350	662	650	1202
-65	-85	85	185	360	680	660	1220
-60	-76	90	194	370	698	670	1238
-55	-67	95	203	380	716	680	1256
-50	-58	100	212	390	734	690	1274
-45	-49	110	230	400	752	700	1292
-40	-40	120	248	410	770	710	1310
-35	-31	130	266	420	788	720	1328
-30	-22	140	284	430	806	730	1346
-25	-13	150	302	440	824	740	1364
-20	-4	160	320	450	842	750	1382
-15	5	170	338	460	860	760	1400
-10	14	180	356	470	878	770	1418
-5	23	190	374	480	896	780	1436
0	32	200	392	490	914	790	1454
5	41	210	410	500	932	800	1472
10	50	220	428	510	950	810	1490
15	59	230	446	520	968	820	1508
20	68	240	464	530	986	830	1526

TEMPERATURE CONVERSION FORMULAS

°C = 5/9 (°F - 32) °F = 9/5 °C + 32

DECIMAL EQUIVALENTS

8ths.	32nds.	64ths.
1/8 = .125	1/32 = .03125	1/64 = .015625 33/64 = .515625
1/4 = .250	3/32 = .09375	3/64 = .046875 35/64 = .546875
3/8 = .375	5/32 = .15625	5/64 = .078125 37/64 = .578125
1/2 = .500	7/32 = .21875	7/64 = .109375 39/64 = .609375
5/8 = .625	9/32 = .28125	9/64 = .140625 41/64 = .640625
3/4 = .750	11/32 = .34375	11/64 = .171875 43/64 = .671875
7/8 = .875	13/32 = .40625	13/64 = .203125 45/64 = .703125
16ths.	15/32 = .46875	15/64 = .234375 47/64 = .734375
1/16 = .0625	17/32 = .53125	17/64 = .265625 49/64 = .765625
3/16 = .1875	19/32 = .59375	19/64 = .296875 51/64 = .796875
5/16 = .3125	21/32 = .65625	21/64 = .328125 53/64 = .828125
7/16 = .4375	23/32 = .71875	23/64 = .359375 55/64 = .859375
9/16 = .5625	25/32 = .78125	25/64 = .390625 57/64 = .890625
11/16 = .6875	27/32 = .84375	27/64 = .421875 59/64 = .921875
13/16 = .8125	29/32 = .90625	29/64 = .453125 61/64 = .953125
15/16 = .9375	31/32 = .96875	31/64 = .484375 63/64 = .984375

MM TO INCH EQUIVALENT

1mm = 0.039 in.	8mm = 0.315 in.	15mm = 0.590 in.	22mm = 0.866 in.
2mm = 0.079 in.	9mm = 0.354 in.	16mm = 0.630 in.	23mm = 0.905 in.
3mm = 0.118 in.	10mm = 0.394 in.	17mm = 0.669 in.	24mm = 0.944 in.
4mm = 0.157 in.	11mm = 0.433 in.	18mm = 0.709 in.	25mm = 0.984 in.
5mm = 0.197 in.	12mm = 0.472 in.	19mm = 0.748 in.	25.4mm = 1 in.
6mm = 0.236 in.	13mm = 0.512 in.	20mm = 0.787 in.	
7mm = 0.276 in.	14mm = 0.551 in.	21mm = 0.827 in.	