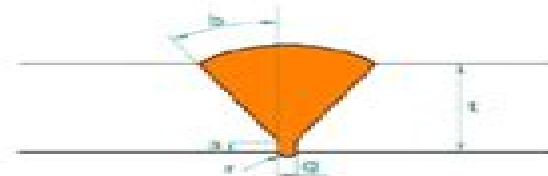


This module uses the method of calculating welding cost recommended by Welding Specialists. Values provided by form on certain inputs are taken from studies conducted by internationally acclaimed institutes.

Calculation No: 2045-WC-003
Joint Type: Groove
Joint Detail: V-Groove
Weld Process: GTAW (root/hoist) + SMAW (fill/cap)
Welding Method: Manual
Total Weld Length: 8.625 m
Joint Thickness: 12.7 mm



Joint Dimensions

Root Gap (g): 2.4 mm Root Face Height (a): 1.5 mm Groove Angle (θ): 37.5 deg
Groove Angle (α): deg Root Penetration (r): 1.6 mm Radius (r1): mm
Cap Height (h): 1.5 mm Branch Thickness (tb): mm Header Thick (th): mm
Thickness (ta): mm

Consumables:

Consumable Group: Stainless & High Alloy Steel
Gas Consumption: 0.33 cu.m/100A.h
Operator Factor: 30 %

Consumable Spec: ER308L ER308L-17
Deposition Efficiency: 90 / 90 %
Deposition Rate: 0.36 / 1.25 kg/hr

Power Characteristics:

Cost per KWh: 1 GBP

Welding Voltage: 30 / 30 V
Welding Current: 200 / 340 A

Cost Input:

Consumable Cost Basis: Boiler
Flux Cost: GBP/kg
Gas Cost: 1 GBP/cu.m

Consumable Cost: / GBP/kg
Labor Cost: 30 / 35 GBP/hr
Trade Name: THERMAJET GE308L / FOX EA54MA

Estimated Expenditure

Welding Consumables to be purchased: 0.33 kg / 30-44 kg
Flux Required: Not Applicable
Gas Consumption: 5.2 cu.m
Power Consumption: 26.2 kWh
Arc time: 0.8 hrs / 8.2 hrs
Manhours (Time to weld): 4 hrs / 43 hrs

Cost for Consumables: 64.5 GBP
Cost for Flux: Not Applicable
Cost for Gas: 5 GBP
Cost for Power: 26 GBP
Cost for Labor: 1370 GBP
Total Cost: 2045 GBP

Notes:

Calculation By: Engineering Pulse

Dated: 07-Mar-14

Welding Estimate Guide

Puja Mehta

A red circular graphic with a gradient, appearing as a semi-circle or a partial circle, located to the right of the author's name.

Welding Estimate Guide:

Industrial Piping and Equipment Estimating Manual Kenneth Storm, 2023-10-17 Industrial Piping and Equipment Estimating Manual Second Edition delivers a comprehensive overview of information that engineers estimators and managers need to develop estimates and create bids Packed with worksheets covering combined and simple cycle power plants refineries compressor stations ethanol hydrogen and biomass plants this reference helps construction engineers and estimators create bids where scope and quantity differences can be identified and project impacts estimated This updated manual provides a comprehensive accurate method for compiling piping and equipment man hour estimates for industrial process plants including Solar Geothermal and Biomass Energy This comprehensive current manual details scopes of work based on process and increased safety in field erection Estimating methods and statistical applications reduce errors for estimators to produce accurate estimates making it an ideal go to reference for estimators engineers and managers with a level of detail and equipment breakdown necessary for today s complex industrial operations Explains estimating methods scopes of work man hour data tables and estimate sheets to produce direct craft man hour estimates RFPs and field change orders Includes scopes of work and man hour data tables for any complexity of design bid and contract Identifies quantity differences using the comparison method to eliminate impacts between proposed and previously installed equipment Represents a broad mix of energy sources including Combined and Simple Cycle Power Plants Refineries Hydrogen Plants Biomass Ethanol and Geothermal Power Plants Compressor Stations and Wastewater Treatment Plants **Cost Estimating Manual for Pipelines and Marine Structures** John S. Page, 1977-01-01 From the Book Preface This manual has been compiled to provide time frames labor crews and equipment spreads to assist the estimator in capsulizing an estimate for the installation of cross country pipelines marshland pipelines nearshore and surf zone pipelines submerged pipelines wharfs jetties dock facilities single point mooring terminals offshore drilling and production platforms and equipment and appurtenances installed thereon The time frames and labor and equipment spreads which appear throughout this manual are the result of many time and method studies conducted under varied conditions and at locations throughout the world these time frames and labor and equipment spreads reflect a complete unbiased view of all operations involved When one is engaged in compiling an estimate from any information furnished by others as is the case with this manual he should view it in an objective light giving due consideration to the nature of the project at hand and evaluating all items that may affect the productivity of labor and all other elements involved Estimating and Costing for the Metal Manufacturing Industries Robert Creese, M. Adithan, 1992-08-25 This practical reference text provides a thorough overview of cost estimating as applied to various manufacturing industries with special emphasis on metal manufacturing concerns It presents examples and study problems illustrating potential applications and the techniques involved in estimating costs Containing both US and metric units for easy conversion of world wide manufacturing data Estimating and Costing for the Metal Manufacturing

Industries outlines professional societies and publications dealing with cost estimating and cost analysis details the four basic metalworking processes machining casting forming and joining reveals five techniques for capital cost estimating including the new AACE International's Recommended Practice 16R 90 and the new knowledge and experience method discusses the effect of scrap rates and operation costs upon unit costs offers four formula methods for conceptual cost estimating and examines material design cost relationships describes cost indexes cost capacity factors multiple improvement curves and facility cost estimation techniques offers a generalized metal cutting economics model for comparison with traditional economic models and more Estimating and Costing for the Metal Manufacturing Industries serves as an on the job single source reference for cost manufacturing and industrial engineers and as a text for upper level undergraduate graduate and postgraduate students in cost estimating engineering economics and production operations courses A Solutions manual to the end of chapter problems is available free of charge to instructors only Requests for the manual must be made on official school stationery

Industrial Construction Estimating Manual Kenneth Storm, 2020-05-27 Industrial Construction Estimating Manual focuses on industrial process plants and enables the contractor subcontractor and engineer to use methods models procedures formats and technical data for developing industrial process plant construction estimates The manual begins with an introduction devoted to labor data collection verification of data coding productivity measurement the unit quantity model and computer aided cost estimating It goes on to provide information on construction materials database systems work estimating computer aided estimating detailed labor estimates bid assurance and detailed applications to construction Practical examples based on historical data collected from past installations are also included as well as a detailed glossary Excel and mathematical formulas metric standard conversions area and volume formulas and boiler man hour tables Industrial Construction Estimating Manual aids contractors subcontractors and engineers with a balance detailed estimating method using the unit quantity model and is an excellent resource for those involved in engineering technology and construction estimating Provides a detailed estimating method using the unit quantity model to prepare construction estimates Delivers information on construction materials databases labor estimates computer aided estimating bid assurance and applications to construction Utilizes historical data from a database of previous similar work calculates material cost and labor by category and produces both summary and detailed man hour and cost estimates

Pipeline Rules of Thumb Handbook E.W. McAllister, 2015-08-03 Now in its sixth edition Pipeline Rules of Thumb Handbook has been and continues to be the standard resource for any professional in the pipeline industry A practical and convenient reference it provides quick solutions to the everyday pipeline problems that the pipeline engineer contractor or designer faces Pipeline Rules of Thumb Handbook assembles hundreds of shortcuts for pipeline construction design and engineering Workable how to methods handy formulas correlations and curves all come together in this one convenient volume Save valuable time and effort using the thousands of illustrations photographs tables calculations and formulas available in an easy to use format Updated and

revised with new material on project scoping plastic pipe data HDPE pipe data fiberglass pipe NEC tables trenching and much more A book you will use day to day guiding every step of pipeline design and maintenance *Conceptual Cost Estimating Manual* John S. Page,1996-06-14 *PDCA Cost and Estimating Guide Volume I* ,2004 Practices and Procedures is the how to manual for estimating painting and related work Quality takeoff procedures and estimating methods are thoroughly described and discussed All elements of proper job pricing are described including the evaluation of labor material additional job costs overhead and profit Working blueprints and sample estimates are a part of the manual Job costing methods and their relationship to estimating is included *Fracture-control Guidelines for Welded Steel Ship Hulls* Stanley Theodore Rolfe,David M. Rhea,Bogdan O. Kuzmanovic,1974 The Report provides comprehensive toughness criteria for welded ship hulls that can be used for steels of all strength levels Because of the fact that stress concentrations are always present in large complex welded structures and therefore high stresses as well as discontinuities or flaws will be present in welded ship hulls primary emphasis in the proposed fracture control guidelines is placed on the use of steels with moderate levels of notch toughness and on the use of properly designed crack arresters In general concepts of fracture mechanics are used to develop the material toughness level that is required for fail safe operation of welded ship hulls

Canadian Blacksmith Gas Welder and Automotive Repairman ,1918 *PPI Construction Depth Reference Manual for the Civil PE Exam eText - 1 Year* Thomas Korman,2016-11-30 Construction Depth Reference Manual prepares you for the construction depth section of the NCEES Civil PE exam All depth topics are covered and exam adopted codes and standards are frequently referenced You will learn how to apply concepts by reviewing the 40 example problems and you can check your solving approaches by reviewing each problem s step by step solution Access to supportive information is just as important as knowledge and problem solving efficiency The Construction Depth Reference Manual s thorough index easily directs you to the codes and concepts you will need during the exam Cross references to the 163 equations 38 tables 93 figures 5 appendices and relevant codes will point you to additional support material when you need it Topics Covered Construction Operations and Methods Earthwork Construction and Layout Estimating Quantity and Cost Material Quality Control and Production Scheduling Temporary Structures Worker Health and Safety **Production Economics** Anoop Desai,Aashi Mital,2018-08-06 This book serves a unique purpose within the world of engineering It covers the economics of modern manufacturing and focuses on examining the techniques and methods from a cost perspective It can be used by both students and professionals alike The book is useful to students in industrial engineering and mechanical engineering programs as a primary textbook for engineering economy production costing and related courses It can also be used by MBA students specializing in production management and finance Specific topics of coverage include the computation of direct and indirect cost for manufacturing operations including a variety of overhead operations in such an environment Costing of manufacturing methods such as casting forging turning milling and welding is addressed along with inventory analysis The

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JATC Handbook United States. Bureau of Apprenticeship and Training,1962

Recognition of Occupational Health

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