

MODUL PENINGKATAN KEMAHIRAN PENGAJAR

Trade : Welding Technology
 NOSS Code : H-024-1
 NOSS : Jurukimpal Arka Logam Berperisai (Keluli Karbon)
 Level : 1
 Duration : 35 Days

No	Module Code	Module	Duty/Task	Terminal Performance Objektif	Fess (RM) / Day		Capacity	Duration (Day)	Date
					HRDB	Person Individual			
1	M03-1-01	SAFETY PRACTICE 1	01.01, 01.02, 01.03, 01.04, 01.05, 01.06	Comply with workshop, equipment and work site safety requirement. Handle fire extinguisher, first aid treatment and artificial respiration. Report unsafe acts condition, accidents and injuries. So that the safety can be carried out and reported immediately in a safe and efficient manner in compliance with the requirement of OSHA.	160	80	10	5	2 - 6 Februari 2009
2	M03-1-02	WELDING MATERIALS	03.01, 03.02	Identify type of materials by interpreting material specification, chart, tables and manuals so that material type and grade is determined.	160	80	10	2	9 - 10 Februari 2009
3	M03-1-03	CUTTING PROCESS 1	04.01, 04.02, 04.03, 04.04	Set up gas cutting equipment and accessories by selecting, installing and checking the equipment so that the equipment is securely installed and safe to operate.	160	80	10	3	11 - 13 Februari 2009
4	M03-1-04	CUTTING PROCESS 2	04.05, 04.06	Cut metal using disc cutter and power saw so that the metal is cut to the required size, shape and dimensional accuracy as per drawing specification.	160	80	10	2	16 - 17 Februari 2009
5	M03-1-05	FABRICATION DRAWING 1	02.01, 02.02, 02.03	Draw and interpret various types of drawing symbols, geometrical constructions and prepare instructional drawing for welding by referring to engineering drawing and welding procedure specification so that the drawing produced is clearly and understood for the operator to carry out welding.	160	80	10	5	23 - 27 Februari 2009
6	M03-1-06	SMAW PROCESS 1	03.03, 03.04 07.01, 07.02, 07.03	Identify SMAW equipment by choosing the parts and accessories so that the parts and accessories is correctly identified for the required welding process. Handle welding consumables by storing and preserving so that the consumables, kept and maintained without losing it chemical and physical properties and according to manufacturer recommendation and carry out buttering / padding using SMAW process on 50 mm to 60 mm diameter carbon steel bar so that the bar radius is increased to 4 mm single layer padding of 100 mm long.	160	80	10	5	2 - 6 Mac 2009
7	M03-1-07	SMAW PROCESS 2	05.01, 05.02, 05.03, 05.04 07.04, 07.05, 07.06	Weld carbon steel plate of thickness range 6mm to 9mm in 2F, 1G and weld schedule 40 carbon steel pipe of range 6 - 8 inches nominal pipe size (NPS) in 1G position by selecting, setting and using SMAW process and checking the weldment so that the weldment is welded according to welding instruction / procedure and the weldment is free from defect and meet the specified welding standard	160	80	10	10	9 - 20 Mac 2009
8	M03-1-08	QUALITY CONTROL 1	08.01, 08.02, 08.03, 08.04, 08.05, 08.06, 08.07	Prepare test workpiece, check against drawing, weld and check the weldment using inspection tools and equipment; prepare specimen for mechanical testing according to test specificatin; carry out mechanical test and evaluate test result so that the test conducted according to procedures and codes requirement.	160	80	10	3	18 - 20 Februari 2009

Trade : Welding Technology
 NOSS Code : H-024-2/ H-025-2/ H-027-2
 NOSS : JURUKIMPAL ARKA LOGAM BERPERISAI/ JURUKIMPAL ARKA GAS TUNGSTEN/ JURUKIMPAL ARKA LOGAM GAS
 Level : 2
 Duration : 61 Days

No	Module Code	Module	Duty/Task	Terminal Performance Objektif	Fees (RM) / Day		Person	Capacity	Duration (Day)	Date
					HRDB	Individual				
1	M03-2-01	WELDING PROCEDURE	2.04	Interpret welding procedure for intended welding so that the welding parameters is identify and planning for the work is done with respect to the preparation of materials and consumable, equipment and and accessories to do the job efficiently	160	80		10	3	1 - 3 April 2009
2	M03-2-02	PLASMA CUTTING	4.07	Cut work piece using air plasma cutting equipment so that the work piece is cut to the required size, shape and dimension accuracy as per drawing specification	160	80		10	3	6 - 8 April 2009
3	M03-2-03	HEAT TREATMENT	06.01, 06.02, 06.03, 06.04	Set up gas equipment, prepare workpiece for pre heating apply heat on parent metal and check surface temperature using tempstick / surface pyrometer on workpiece so that the heat affected area is identified and maintained according to the procedure	160	80		10	3	13 - 15 April 2008
4	M03-2-04	WELDING INSPECTION 1	8.08	Conduct mechanical test by monitoring and absevring the inspection work so that the inspection is conducted according to procedure and specification	160	80		10	3	20 - 22 April 2009
5	M03-2-05	SMAW PROCESS 3	07.07, 07.08, 07.09, 07.10	Perform weld on Carbon Steel Plate range from 9 mm to 12 mm in 3F, 2G, 3G and 4G position by preparing material, selecting electrode, setting equipment and welding using SMAW process so that the plate is welded according to the given procedure and safety.	160	80		10	7	27 April - 6 May 2009
6	M03-2-06	SMAW PROCESS 4	07.11, 07.12	Weld carbon steel pipe schedule 40 & 80 of NPS range 2 inches to 8 inches in 2G and 5G position by preparing the pipe, setting up the equipment and welding using SMAW proses so that the pipe is welded according to the given procedure and safety to meet welding standard and free from defect.	160	80		10	7	11 - 19 May 2009
7	M03-2-07	SMAW PROCESS 5	07.13, 07.14	Weld stainless steel plate in 2G position and dissimilar metal carbon steel to stainless steel in 1G position plate range 6 mm to 9 mm by preparing the plate, setting up the equipment and welding using SMAW proses so that the plate is welded according to the given procedure and safety to meet welding standard and free from defect.	160	80		10	7	20 - 28 May 2009
8	M03-2-08	GTAW PROCESS 1	(H-025-2) 10.01, 10.02, 10.03, 10.04, 10.05, 10.06	Perform weld on Carbon Steel Plate range from 1.8 mm to 3.0 mm in 1G, 2F, 2G and 3G position by preparing material, selecting filler wire, setting equipment and welding using GTAW process so that the plate is welded according to the given procedure and safety.	160	80		10	7	1 - 9 Jun 2009
9	M03-2-09	GTAW PROCESS 2	10.07, 10.08	Weld carbon steel pipe schedule 80 of NPS 2 inches in 1G and schedule 40 of NPS 6-8 inches in 5G position by preparing the pipe, setting up the equipment and welding using GTAW proses so that the pipe is welded according to the given procedure and safety to meet welding standard and free from defect.	160	80		10	7	11 - 19 Jun 2009
10	M03-2-10	GMAW PROCESS 1	(H-027-2) 10.01, 10.02, 10.03, 10.04, 10.05, 10.06	Perform weld on Carbon Steel Plate range from 3 mm to 9 mm in 1G, 2F, 2G and 3G position by preparing material, selecting filler wire, setting equipment and welding using GMAW process so that the plate is welded according to the given procedure and safety.	160	80		10	7	22 - 30 Jun 2009
11	M03-2-11	GMAW PROCESS 2	10.07, 10.08	Weld carbon steel pipe schedule 40 of NPS range 6 inches to 8 inches in 1G and 5G position by preparing the pipe, setting up the equipment and welding using GMAW proses so that the pipe is welded according to the given procedure and safety to meet welding standard and free from defect.	160	80		10	7	1 - 9 Julai 2009

MODUL PENINGKATAN KEMAHIRAN PENGAJAR

Trade : Welding Technology
 NOSS Code : H-024-3
 NOSS : Jurukimpal Arka Logam Berperisai (Keluli Karbon & Keluli Tahan Karat)
 Level : 3
 Duration : 116 Days

No	Module Code	Module	Duty/Task	Terminal Performance Objective	Fees (RM)		Capacity	Duration (Day)	Date
					HRDB	Individual			
1	M03-3-01	SAFETY PRACTICE 2	01.07, 01.08	Conduct welding safety briefing to welder before carrying out fabrication activities and audit welding safety practices so that safety precaution and practices related to welding and fabrication is delivered clearly to the welders beside that compliance and non compliance practices are identified and revised.	160	80	10	3	10 - 12 Mac 2009
2	M03-3-02	FABRICATION DRAWING 2	2.05	constructions and prepare instructional drawing for welding by referring to engineering drawing and welding procedure specification so that the drawing produced is clearly and understood for the operator to carry out welding.	160	80	10	5	16 - 20 Mac 2009
3	M03-3-03	SMAW PROCESS 6	07.15, 07.16	Weld 8 inch (NPS) schedule 40 and 2 inch (NPS) schedule 80 carbon steel pipe in 6G position using SMAW process so that the pipe is selected, prepared, welded and checked according to welding instruction and meet specified welding standard.	160	80	10	10	23 Mac - 2 April 2008
4	M03-3-04	SMAW PROCESS 7	7.17	Weld 8 inch (NPS) carbon steel pipe schedule 40 with schedule 80 in 6GR position by selecting preparing and setting the pipe using SMAW process and checking the weldment so that the pipe is welded according to welding procedure and the weldment free from defect and meet specified welding standard.	160	80	10	10	6 - 17 April 2009
5	M03-3-05	GTAW PROCESS 3	10.19, 10.20	Weld 2 inch (NPS) carbon steel pipe schedule 40 and 2 inch (NPS) stainless steel pipe schedule 40 in 6G position by selecting, preparing and setting the pipe using GTAW process and checking the weldment so that the pipe is welded according to welding procedure and the weldment is free from defect and meet specified welding standard.	160	80	10	10	4 - 15 May 2009
6	M03-3-06	GTAW PROCESS 4	10.18	Weld Aluminium pipe 6mm x 100 mm diameter in 1G position and weld dissimilar metal carbon steel pipe to stainless steel pipe 4 inch (NPS) schedule 10 in 6G position, by selecting, preparing and setting the pipe using GTAW process and checking the weldment so that the pipe is welded according to welding procedure and the weldment is free from defect and meet specified welding standard.	160	80	10	10	18 - 29 May 2009
7	M03-3-07	GTAW AND SMAW COMBINATION PROCESS		Weld 8 inch (NPS) carbon steel pipe schedule 80 in 6GC position and 8 inch (NPS) stainless steel pipe schedule 80 in 6GC position and 2 inch (NPS) carbon steel pipe schedule 80 in 6GC position by selecting, preparing and setting the pipe using GTAW and SMAW combination process and checking the weldment so that the pipe is welded according to welding procedure and the weldment is free from defect and meet specified welding standard.	160	80	10	10	1 - 12 Jun 2009
8	M03-3-08	GMAW PROCESS 3	10.15, 10.17, 10.18	Weld Carbon Steel pipe 6 inch schedule 40 in 6G position by using GMAW process so that the parts are joint together without distortion and free from defect to meet specific standard	160	80	10	10	15 - 26 Jun 2009
9	M03-3-09	GMAW PROCESS 4	10.16	Weld Stainless Steel pipe 6 inches schedule 40 in 6G position and Aluminium pipe schedule 40 6 inches to aluminium Plate 6 mm thickness in 5F position by using GMAW process so that the parts are joint together without distortion and free from defect to meet specific standard	160	80	10	10	29 - 10 Jun 2009

10	M03-3-10	OTHER WELDING PROCESS 1		Weld 9mm-18mm carbon steel plate in 2F and 1G position by using FCAW, 1mm-3mm stainless and carbon steel plate in 1G position by PAW process and perform brazing on steel and copper tube of 50mm according to procedure so that the weldments are free from defect and meet specified welding standard.	160	80	10	10	13 - 24 Jun 2009
11	M03-3-11	OTHER WELDING PROCESS 2		Perform Resistance spot welding, beam welding and plastic welding process on specified material given and check the weldment so that the materials are welded to meet the specified welding standard.	160	80	10	5	27 - 31 Jun 2009
12	M03-3-12	CUTTING PROCESS 3		Perform carbon arc gouging and CNC oxy-acetylene cutting process for a given job and preparing materials, measure and mark, set-up equipment and holding devices so that the material can be cut as per given specification.	160	80	10	5	6 - 10 Julai 2009
13	M03-3-13	FABRICATION WORK		Make branch and header pipe of equal and unequal diameter 90°, 60°, 45° and 30° with slip in flange by cutting materials and joining parts; make eccentric reducer piece by marking, cutting, rolling and bending using appropriate tools and equipment so that they are fabric as per drawing specification.	160	80	10	5	20 - 24 April 2009
14	M03-3-14	QUALITY CONTROL 2	8.09	Plant outgoing quality control system by develop documentation so that quality control on finished product can be evaluated.	160	80	10	3	27 - 30 April 2009
15	M03-3-15	WELDING SUPERVISORY FUNCTION	03.05 09.01, 09.02, 09.03, 09.04, 09.05, 09.06, 09.07	Plan work shedule, monitor welding activities, equipment and accessories by checking the critical aspect of welding work and process and welding maintenance record so that the quality of weld are maintained and equipment and accessories always in good operating condition. Propose workshop layout and budget by identifying work activities requirement so that the workshop layout and budget proposed will be able to meet	160	80	10	5	13 - 17 Julai 2009
16	M03-3-16	ENGINEERING DESIGN		Carry out fundamental project analysis and design the project by identifying the proposal design and cost estimated, fabricate project model by assemble materials and components and write report so that the project model will function according to the specification	160	80	10	5	20 - 24 Julai 2009

MODUL PENINGKATAN KEMAHIRAN PENGAJAR

Trade : Welding Technology
 NOSS Code : H-023-4
 NOSS : Personel Pengurusan Fabrikasi
 Level : 4
 Duration : 147 Days

No	Module Code	Module	Duty/Task	Terminal Performance Objektif	Fees (RM) Person / Day		Capacity	Duration (Day)	Date
					HRDB	Individual			
1	M03-4-01	SAFETY, ENVIRONMENTAL & HEALTH PRACTICES	01.01, 01.02, 01.03, 01.04, 01.05, 01.06	Verify, enforce and evaluation of safety records so that the safety environmental and health practice awareness is promoted and disseminated to all personnel effectively.	160	80	10	5	5 - 9 Oktober 2009
2	M03-4-02	QUALITY CONTROL MANUAL	02.01, 02.02, 02.03, 02.04, 02.05, 02.06, 10.01	Prepare, perform, conduct and compile, specific inspection test plan, WPS, WPQT, PQR, WQT and QAM by identifying job specification and sequence of inspection, selecting the process and consumable using codes and standard, monitoring the test collecting and compiling fragmented data and test result into information, observing a welder welding performance and weldment and collecting and determining the sequence and adequacy of relevant document so that meets the compliance, the procedure validity is determined, the record contained all essential and relevant information, control and audit and used as reference, the welder performance is determined, verified/certified and the manual content meets the quality.	160	80	10	3	12 - 14 Oktober 2009
3	M03-4-03	QUALITY CONTROL 3	03.01, 03.02, 03.03, 03.04, 03.05	Check and evaluate design drawing and specification of fabrication material and consumable by referring to code of practice so that the weldment structure alignment and dimensional requirement are determined and maintained to specification and then the work schedule generated from that is clearly explained and illustrated for the welder to carry out welding.	160	80	10	5	19 - 23 Oktober 2009
4	M03-4-04	QUALITY ASSURANCE 1	04.01, 04.02, 04.03	Interpret codes and standard, compile and adopt quality assurance and quality assurance manual (QAM) so that the compilation is adequate and ready for adoption and its meets legislation requirement and client quality objectives.	160	80	10	10	26 Okt - 6 Nov 2009
5	M03-4-05	ACTIVITIES RELATED TO FABRICATION WORK	05.01, 05.02, 05.03, 05.04, 05.05, 05.06, 05.07, 05.08, 05.09, 05.10, 05.11	Manage activities related to fabrication work by select and design jigs and fixtures, decide predictive and corrective action method, conduct heat treatment, verify appropriate corrosion protection and prepare sub-contract scope of work requirement (welding, NDT, heat-treatment and coating) so that the process is carried out in accordance to work scope and sub-contract scope of work can be prepared accordingly	160	80	10	10	9 - 20 Nov 2009
6	M03-4-06	WELDING INSPECTION 2	07.01, 07.02, 07.03, 07.04, 07.05, 07.06	Determine, conduct, supervise, review and compile method of inspection (visual inspection and non-destructive testing), report and test result and inspection record so that the compilation is in accordance to quality assurance manual requirement	160	80	10	5	30 Nov - 4 Dis 2009
7	M03-4-07	FACILITIES, CONSUMABLE & EQUIPMENT MAINTANANCE 1	08.01, 08.02	Maintain facilities, consumable and equipment to ensure calibration servicing of instrument and plant are fit to schedule codes and standard so that they are operating at optimum and in full compliance to statutory safety requirement.	160	80	10	5	7 - 11 Dis 2009
8	M03-4-08	WELDING SIMULATION	11.01, 11.02, 11.03	Apply computer software of office application, hardware and software application and engineering drawing (CAD) to related welding fabrication so that the quality, performance is of a high level of accuracy	160	80	10	10	14 - 28 Dis 2009
9	M03-4-09	WELDING FABRICATION ACTIVITIES 1	06.01, 06.02	Manage activities related to fabrication work by selecting design jigs and fixtures, decide predictive and corrective action method, conduct heat-treatment, verify approved correction protection and prepare sub-contract scope of work requirement (Welding, NDT, Heat-Treatment and Coating) project implementation and demonstrating to panel using communication so that the process is carried out in accordance to work scope and sub-contract scope of work can be prepared accordingly	160	80	10	3	29 - 31 Dis 2009