

SPECIFIC REGISTRATION REQUIREMENTS
FOR
MECHANICAL & ELECTRICAL WORKHEADS (ME)

APRIL 2010 EDITION

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WORKHEAD CLASSIFICATION AND DESCRIPTION

Workhead	Title	Description
ME01	Air-conditioning, Refrigeration & Ventilation Works	The installation, commissioning, maintenance and repairs of air-conditioning, refrigeration, cold rooms, and ventilation systems.
ME02	Building Automation, Industrial & Process Control Systems	Installation and maintenance of microprocessor or computer based building control systems (e.g. integrated environmental control, fire and security computer control system), industrial process control systems. Firms involved in supply of control instruments and equipment should register themselves under SY05.
ME04	Communication & Security Systems	(a) Installation and maintenance of communications system (e.g. intercom & wireless radio) and security systems (e.g. CCTV, security alarm, car park security control and card access system). (b) Installation and maintenance of Central Antenna Television (CATV) systems.
ME05	Electrical Engineering	The installation, testing, commissioning, maintenance and repair of electrical based systems such as switchgears, transformers and large generators. It also includes the electrical installations in building and marine vessels. Applicants must employ a full-time employee who has a valid electrical licence. Firms, which are suppliers of electrical equipment or materials, should register under the relevant supply heads.
ME06	Fire Prevention & Protection Systems	Installation and maintenance of fire alarm, prevention and protection systems. This head may include the supply of fire extinguishers and fire hoses if these items are part and parcel of the system installation or maintenance contract. Supplier of fire extinguishers and fire hoses should register under the relevant Expenditure & Procurement Policies Unit (EPPU) head.
ME07	High & Low Tension Overhead Line Installation	(a) Installation and maintenance of low and high-tension overhead cables. (b) Installation of poles for overhead cable and street lighting.
ME08	Internal Telephone Wiring for Telecommunications	Wiring work within a building for telecommunications purposes. Applicants must possess a valid IDA telecommunication wiring contractor's licence.
ME09	Lift & Escalator Installation	This covers the installation, commissioning and maintenance of lifts, escalators and travellers.
ME10	Line Plant Cabling/ Wiring for Telecommunications	Laying of underground telecommunication cables.
ME11	Mechanical Engineering	The installation, commissioning, maintenance and repair of mechanical plant, machinery and systems. It includes the installation and maintenance of power generation and turbine systems. Firms which only supply the hardware should register under the relevant supply heads.
ME12	Plumbing & Sanitary Works	Installation, repairs and servicing of water and gas pipes, sanitary works and plumbing fixtures. Applicants must possess a valid PUB Water Service Plumber Licence, EMA Gas Service Worker Licence or SPS Plumber Licence.
ME13	Traffic Light Systems	Installation and maintenance of traffic light systems.
ME14	Underground Pipeline for Telecommunications	Laying of underground pipes for the purpose of telecommunications only.
ME15	Integrated Building Services	The installation, commissioning, maintenance and repairs of building services, which include some or all of the following: ME01, ME02, ME04, ME05, ME06, ME08, ME11, and ME12. <i>(please refer to the registration requisites in Appendix B, Table B3)</i>

**TABLE B1
REGISTRATION REQUIREMENTS**

Grade	(Tendering Limit) (\$)	Financial (Min Paid-Up Capital & Min Net Worth) (\$)	Management (see Table B2 for more details)		Track Record (past 3 years) (\$)
			All except ME09	ME09	
L6	Please refer to BCA website for the tendering limits (http://www.bca.gov.sg/ContractorsRegistry/contractors_tendering_limits.html)	1.5m	2P, both with at least 5 years of relevant experience	2P, both with at least 5 years of relevant experience	30.0m of which 7.5m PS 3.0m MC and 3.0m SP
L5		500,000	1P or 2T, one with at least 8 years of relevant experience	1P or 2T, one with at least 8 years of relevant experience	10.0m of which 1.0m SP
L4		250,000	2T, one with at least 5 years of relevant experience	2T, one with at least 5 years of relevant experience	5.0m of which 500,000 SP
L3		150,000	2T	2T	3.0m
L2		50,000	1T with 3 years of relevant experience	1T with 3 years of relevant experience	1.0m
L1		10,000 50,000 (for ME09 from 1 Oct 2008)	1T	1T with 3 years of relevant experience	-

Note:

- 1) m stands for million
- 2) Both minimum (min) paid-up capital and minimum net worth must be met. L1 firms are required to submit the latest management accounts (not more than 12 months old).
- 3) PS – projects executed in Singapore
- 4) MC – main contracts (nominated sub-contracts may be included)
- 5) SP – minimum size single project (main/sub-contract) executed entirely by the applicant
- 6) P/T – Professional and Technical personnel with relevant qualifications (see Table B3 for more details).

**TABLE B2
PERSONNEL QUALIFICATION**

Workhead	Title	Personnel Qualifications and Licences
ME01*	Air-Conditioning, Refrigeration & Ventilation Works	“P” shall mean a Professional qualification with a recognised degree in Electrical/Electronics or Mechanical Engineering or equivalent.
ME02*	Building Automation, Industrial & Process Control Systems	“T” shall mean a Technical qualification with a recognised diploma in Electrical/Electronics or Mechanical Engineering or equivalent.
ME04*	Communications & Security Systems	
ME06*	Fire Prevention & Protection Systems	
ME09	Lift & Escalator Installation	
ME11	Mechanical Engineering	“P” shall mean a Professional qualification with a recognised degree in Mechanical Engineering or equivalent.
ME12*	Plumbing & Sanitary Works	“T” shall mean a Technical qualification with a recognised diploma in Mechanical Engineering or equivalent. For ME12, a valid plumber licence issued by EMA, PUB or SPS can be considered for grades L1 and L2 only.
ME05*	Electrical Engineering	“P” shall mean a Professional qualification with a recognised degree in Electrical/Electronics Engineering or equivalent.
ME07	High & Low Tension Overhead Line Installation	“T” shall mean a Technical qualification with a recognised diploma in Electrical/Electronics Engineering or equivalent.
ME08	Internal Telephone Wiring for Telecommunications	For ME05, an EMA electrician can be considered as one of the “T” for grades L1 and L2 only. An EMA electrical technician can be considered as one of the “T” for grades L3 to L5.
ME10	Line Plant Cabling/Wiring for Telecommunications	
ME13	Traffic Light Systems	For ME10 & ME14, a holder of BCA Builder Certificate or NTC2 in electrical trade can be considered for L1 and 2 holders of BCA Builder Certificate of NTC2 in electrical trade can be considered for L2.
ME14	Underground Pipeline for Telecommunications	For ME14, degree/diploma/NCCS from Civil and Structural Engineering can be considered.
ME15	Integrated Building Services	Please refer to Table B3 for more details.

Note:

* For ME01, ME02, ME04, ME05, ME06 and ME12, Advance National Building Qualification (NBQ)/Specialist Diploma in M&E Coordination is acceptable as an approved technical qualification for Grades L1 to L5.

TABLE B3
ME15 – INTEGRATED BUILDING SERVICES

To be registered under this workhead, firms must already be registered at L2 (\$500,000) & above under ME01, ME05 and at least one other *ME workhead registered in ME02, ME04, ME06, ME08, ME11 or ME12.

Registration grade will be pegged at the higher grade of the compulsory M&E workheads (i.e. ME01 & ME05) subject to a maximum of 2 grades higher than that of the lower workhead. The lowest registration grade shall be L2.

Firms must also possess the following licences:

- a. A full-time employee who has a valid EMA electrical licence.
- b. A valid IDA telecommunication wiring contractor's licence.

Personnel requirements are listed in the table below:

Grade	Tendering Capacity (\$)	Minimum ME Requirements	Minimum Personnel Requirement (pls see notes 2, 3 and 4)
L6	Please refer to BCA website for the tendering limits http://www.bca.gov.sg/ContractorsRegistry/contractors_tendering_limits.html	ME01 = L6, ME05 ≥ L4 and one other *ME workhead ≥ L2 OR ME01 ≥ L4, ME05 = L6 and one other *ME workhead ≥ L2	2 holders of University Degree with at least 5 years of relevant experience, one of whom must hold either a Advance National Building Qualification (NBQ)/Specialist Diploma in Building Services Engineering or Intelligent Building Technology.
L5		ME01 ≥ L5, ME05 ≥ L3 and one other *ME workhead ≥ L2 OR ME01 ≥ L3, ME05 ≥ L5 and one other *ME workhead ≥ L2	1 holder of University Degree who also holds either a Advance National Building Qualification (NBQ)/Specialist Diploma in M&E Coordination or Diploma in Building Services Engineering, OR 2 holders of Polytechnic Diploma, one of whom must have at least 8 years of relevant experience and holds either a Certificate/Specialist Diploma in M&E Coordination, Building Services Engineering or Intelligent Building Technology.
L4		ME01 ≥ L4, ME05 ≥ L2 and one other *ME workhead ≥ L2 OR ME01 ≥ L2, ME05 ≥ L4 and one other *ME workhead ≥ L2	2 holders of approved technical qualification, one of whom must have at least 5 years of relevant experience and holds either a Advance National Building Qualification (NBQ)/Specialist Diploma in M&E Coordination, Building Services Engineering or Intelligent Building Technology.
L3		ME01 ≥ L3, ME05 ≥ L2 and one other *ME workhead ≥ L2 OR ME01 ≥ L2, ME05 ≥ L3 and one other *ME workhead ≥ L2	1 holder of Polytechnic Diploma, and either 1 holder of Advance National Building Qualification (NBQ)/Specialist Diploma in M&E Coordination, Building Services Engineering or Intelligent Building Technology.
L2		ME01 ≥ L2, ME05 ≥ L2 and one other *ME workhead ≥ L2	1 holder of Advance National Building Qualification (NBQ)/Specialist Diploma in M&E Coordination, Building Services Engineering or Intelligent Building Technology. with at least 3 years of relevant experience.

Note:

- 1) m stands for million
- 2) The University Degree or Polytechnic Diploma must be either in Electrical/Electronics, Mechanical Engineering, Building Service, or equivalent.
- 3) Diploma in Building Services Engineering must be awarded by Ngee Ann Polytechnic.
- 4) Diploma in Intelligent Building Technology must be awarded by Temasek Polytechnic.

**TABLE B4
LICENCE**

Workhead	Title	Licence Required
ME05	Electrical Engineering	Applicants must employ a full-time employee who has a valid electrical licence.
ME08	Internal Telephone Wiring for Telecommunications	Applicants must possess a valid IDA telecommunication wiring contractor's licence.
ME12	Plumbing & Sanitary Works	Applicants must possess a valid PUB Water Service Plumber Licence, EMA Gas Service Worker Licence or SPS Plumber Licence.
ME15	Integrated Building Services	Applicant must employ a full-time employee who has a valid electrical licence and possess a valid IDA telecommunication wiring contractor's licence.