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(*Learning Experiences *Supporting Innovations
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To be officiated by:

Y.B. Dato' Law Hieng Ding

Minister of Science Technology & Environment

30th - 31st October, 2001

Mandarin Oriental, Kuala Lumpur, Malaysia

Online registration and details at:

www.materialsplanet.com

Tel: +603.2272.5002 / +6013.3213.617

e-mail : events@materialsplanet.com fax : +603.2272.5003

Event Postal Address: B-9-8, Menara Pelangi, 8 Jln Ang Seng 2, 50470 Kuala Lumpur



A 'MUST ATTEND' EVENT FOR ALL: *CEOs, Directors, Managers, Officers *Scientist, Metallurgists, Engineers, Consultants, Chemist, Technologists *End User Facility Managers & Specifiers *Governmental & Public Works Organisations *Construction, Architectural & Design Managers, Consultants *QA&QC Specialist *Purchasing Agents & Officers *R&D and Technical Directors & Managers **INVOLVED IN:** Fabrication, Materials Manufacturing, Corrosion & Coatings, Surface Preparation, Application & Inspection Technologies, Galvanizing, Materials Supplies & Distribution, Engineering, NDT & Contracting Works & Consultancies, Testing Equipment, Equipment & Tools Manufacturing, ICT Solutions, Health, Safety and Environment Control & Regulations, Education and Human Resource Training and Development, Decision Making, Oil & Gas Industries, Shipyard Engineering, Power Generations, etc...

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“FABRICATION TECHNOLOGY” **(Incorporating CORROSION 2001)**

The **Institute of Materials, Malaysia**, brings you an exciting event for the year 2001. The many years of experiences, best practices, new ideas and innovations will be made available and shared with those who understand the need to continue learning from the world of **EXPERIENCES AND CHALLENGES**.

This year prestigious International Event and Conference will bring you proven fabrication technology covering topics on:

- Fabrication Materials – CRA materials, Polymers
- Fabrication Technology and Processes
- Trends & Development in Welding Technology
- Codes and Specification – Comparison of the various specifications, codes changes
- Health, Safety & Environment – Expectation and current practices
- Corrosion Protection & Coating
- Galvanizing Technology & Processes
- Quality and Inspection

Showcase project case studies (lessons learnt):-

- related to the above topics.
- experiences on EU standardization of practices and codes.
- future trending in fabrication technology.
- effect of costing on the use of technology.
- world market changes – effect on business.
- The importance and challenges toward Quality Assurance.
- Use of environmental friendly coatings i.e. water borne coatings.
- TSA Technology
- Use of Steel Detailing and Fabricating Computer Software
- Will the use of Technology reduce Maintenance Cost?
- Maintenance Methodology - Painting, retrofits, etc.

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JIMM – Journal , Institute of Materials, Malaysia

EDITOR'S COLUMN

I have great pleasure in announcing the second issue of the Journal Institute of Materials Malaysia. It has seen some design changes and some formatting too. The Journal will come your way soon because it will be distributed to members. I will be sending some copies to most research institutes and universities around the region. I shall of course send some copies to IoM, U.K. Please contribute your articles to the journal to keep it alive.

Thank you and I look forward to getting your contributions.

NOTES FOR AUTHORS

SUBMISSION

Manuscripts (two copies) should be typed using double spacing on one side of an A4 paper and submitted either in hard copy accompanied by a diskette in Word for Windows. **Alternatively authors are encouraged to submit articles to the Chief Editor at the e-mail address. Zip files are encouraged.** Authors must clearly state the section they wish to place their contributions in. The typescript should proceed in the order, title page, name of author (s) and address, abstract, text, nomenclature, references, acknowledgements and the appendices. Figures, photographs, micrographs and tables should follow after this if they are not already formatted into the text (which is highly encouraged)

Title page

The title page should contain the name(s) of the author(s) and the establishment where the work was carried out as well as the place where the authors have since moved if they have a different permanent address.

Abstract

All submissions must be accompanied by an abstract of not more than 150 words.

Keywords

A list of key words of not more than 10 words must be supplied with each submission

Text

Clear differentiation must exist between headings. Each major heading must be placed in the middle of the text and be given in capitals. Minor headings need be capitalised but be flush with the left margin. All equations should be written using Microsoft Equation 2.0 or 3.0. Equations and Tables should be numbered serially 1, 2, 3 and so forth. Footnotes in the text are not encouraged. SI units should be used.

Figures and photographs, including micrographs may be scanned and submitted in diskettes or electronically. Tables should be labelled on top of the table and Figures at the bottom.

References

The reference list should be typed single space, although separated from one another by an extra line of space. The reference cited in the text as Author(s). Year and listed in the Reference Section as

Journals: Author(s). Year. *Journal*. Vol(no): First page-last page

Books; Author (s). Year. *Title*. City: Publisher.

Queries

Any queries on the format and presentation may be addressed to the Chief Editor at the Editorial Address or at the e-mail address given

Prof. Dr. Che Husna Azhari

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ACTIVITY ORGANIZERS FOR IMM

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Email : gading99@tm.net.my
Contact persons : Ms Chan Moi Leng/Mr . Raymond Swa

2. **Sarawak IMM Courses:**

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Lot 600, 2nd Floor, Block 7,
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Email : events@materialsplanet.com
Contact persons : Mr. Stephen Tong/Ms. Mandy Thang

IMPORTANT NOTICE !!!

Graduates of IMM Certification Schemes must now sustain their IMM membership for the duration of their certificate. IMM Certificates are usually valid for 5 years and holders of these Certificates must subscribe their IMM memberships for 5 years .
(with immediate effect).

The following Certification Schemes are currently affected :-

- (1) IMM Coatings Inspector Certification Scheme
- (2) IMM C.P. Technician Level 1,2 & 3 Certification Schemes
- (3) IMM Protective Coatings (Blaster & Painter) Certification Scheme
- (4) IMM Welding Inspector Certification Scheme
- (5) IMM Senior Coatings Inspector Certification Scheme

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SOUTHERN REGION COMMITTEE

IMM Southern Region committee has successfully conducted a two-day course on Advanced Metallography & Microstructural Analysis on 24 – 25 May 2001. The course which was jointly organised by IMM Southern Region, Department of Materials Engineering (UTM) and CLMO Technology Sdn Bhd. received encouraging response and only the first 30 participants were selected due to limited places.

The course was conducted by Mr. Rene Hoeg who is Buehler Asia Pacific Regional Manager based in Hong Kong. He has vast experience in Metallography and has conducted similar courses all over the world. He was assisted by CLMO Technology, UTM academic and technical staff during the workshops.

The lecture was held at the Faculty of Mechanical Engineering Seminar Hall and the workshops were conducted in the Materials Science Laboratory UTM. The laboratory was equipped with the latest specimen preparation and characterisation equipment which were fully utilised during the course. The participants were also treated to a Chinese Dinner at Pan Pacific Hotel by the sponsors and they enjoyed it very much.

The organizing committee intend to conduct a similar course next year but places will be limited to 24 only in order to allow each participant more time for the hands-on session. All enquiries can be directed to the Chairman IMM Southern Region Committee.

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The course participants and organising committee with the Dean of Faculty of Mechanical Engineering UTM, Prof. Ir. Dr. Alias Mohd Noor (centre)



The course participants during lecture in the Seminar Hall, UTM



The participants and organising committee during Chinese dinner at Puteri Pan Pacific, Johor Bahru

IMM SARAWAK COMMITTEE

SARAWAK COMMITTEE ACTIVITY REPORT

17 Blasters/Painters attended IMM protective coatings technician training, organised by IMM Sarawak Committee, Miri, Sarawak

Seventeen blasters/painters involve in the oil and gas industry has completed the protective coatings training and certification programme at Lutong, Miri on 29/6/2001.

The course was organised by the Institute of Materials, Malaysia (IMM Sarawak Committee) under the CORAL initiative. The course was conducted by IMM Trainer, Mr. Telajan Luyoh and assisted by Mr. Sela Ranggaw with the objective to upgrade the skills of workers to the industry standard.

The candidates consisting of 6 personnel from Syarikat Bersaudara Lutong and 11 from Corro-Shield Sdn Bhd were briefed by the trainers on the CORAL initiative cost reduction drive, and root cause of coatings failures/corrosion problems experienced in the oil & gas industry. The training also covered improvements to coatings application and issues on health, safety and the environment.

The course also saw the participants sitting for the theory and practical assessment which leads to the award of a level 1 and level 2 certification by IMM. They were urged to perform their task professionally, and to maintain high standard of work at all times in order to reduce the overall long term maintenance cost.

Besides the IMM blaster/painter certification program, IMM Sarawak Committee also run other technical courses such as the Coatings Inspector, Welding and Cathodic Protection (CP) certification schemes. Enquiries pertaining to IMM activities/courses can be directed to the local IMM Activity Organiser (tel/fax no : 085-659564)

BLASTER/PAINTER TECHNICIAN TRAINING ORGANISED BY IMM SARAWAK ON 26/6/2001



**PRACTICAL TRAINING/ASSESSMENT
IN PROGRESS (BLASTING OPERATING)**



GROUP PHOTO OF PARTICIPANTS PRIOR TO PRACTICAL ASSESSMENT



PROTECTIVE COATINGS TECHNICIAN
(BLASTER & PAINTER)
COMPETENCY CERTIFICATION SCHEME

(Second Revision)
with effect from

1st May, 2001

PROTECTIVE COATINGS TECHNICIAN TRAINING/ASSESSMENT & CERTIFICATION

INTRODUCTION

This brochure will guide you on how to go about obtaining the IMM protective coating technician assessment and certification scheme. It is designed to satisfy the Malaysian Oil & Gas Exploration & Production (EP) industry need for formally assessed and certified blasters and painters as required in the Standard Malaysian EP Oil & Gas industry blasting and painting Specification no: CORAL PO-C-07-0997-0198:Protection Coating.

The CORAL Blaster and Painter Training/Assessment & Certification Scheme was established in response to industry identifying a need to enhance the skills of blasters and painters in the EP industry. The scheme is aimed at improving the quality of workmanship thereby reducing overall costs. In the Malaysian EP industry, the total cost from rework, in-service repair and total recoating is estimated at a staggering RM45m annually. Lesson's learnt is that premature failures not matching the system's life-span capability are often encountered by all asset operators/owners. Root cause analysis by manufacturers and industry research attributed up to 70% of it to surface prep. and application weakness.

The local industry mindset needs to change and recognise the importance of painting. By default of the term "painting", it is often associated with cosmetic and not the protective function that it provides. Hence the often lower priority. Recognise that in most cases, the typically 0.325mm to 1.0mm resultant paint "skin" is the only barrier protecting against expensive environmental corrosion. Blasting and painting deserves to be recognised as a skilled task to effectively deliver this "hi-tech" protection.

Traditionally, blasters and painters acquire their trade through on-the-job trial and error experience. Unlike their more "glamorous" welder colleagues, there is very limited training nor do they undergo any assessment/certification. Hence, quality of the final protection coating may not be as optimum as it could be; sometimes requiring costly repainting works at short cycle times.

The objective of this CORAL project is to help industry design, set-up and facilitate implementation of a training/assessment & certification scheme for blasters and painters. The target result is that the industry can look forward with better confidence to higher quality coatings and lower overall cost. This aspect is in line with ISO9001 process control and also reduces micro inspection. A cross industry project team was charged with this task. A comprehensive yet fit-for-purpose programme was formulated and a suitable implementation vehicle sought.

The first avenue opened is via the Institute of Materials, Malaysia (IMM); a non-profit Malaysian professional organisation. In line with it's charter to advance this industry, it was approached and accepted the challenge of coordinating and administering this scheme. All EP and work site blasting and painting service providers are requested to contact their nearest IMM branch or directly call the K.L. HQ (tel: 03-5218228; fax: 03-5219413) to upgrade their workforce.

THE SCHEME (HOW IT WORKS)

Graduates of the programme will be issued with a Certificate and Identification Card and be graded as "IMM Certified Protective Coatings Technician Level 1 (Blaster)" or "IMM Certified Protective Coatings Technician Level 1 (Painter)" or "IMM Certified Protective Coatings Technician Level 2 (Multi-skill)".

The programme consists of a half-day classroom theory lesson followed by another half-day of assessment test. The assessment test comprises of 2 parts. The first part is a multiple-choice theory test. The second part is a practical test whereby the candidates are assessed on their skills in blasting and painting on a mild steel test panel. Candidates have a choice to sit for only the Blaster or Painter examinations or both. The competency certification programme will be co-ordinated by the Institute of Materials, Malaysia (IMM) who will register the candidates and issue the certificates. The theory lessons and practical tests will be conducted by IMM-certified trainers at the respective "Training Facilities" throughout Malaysia. The practical tests will be witnessed by IMM officials at the respective Training Facilities throughout Malaysia. The candidates will have to register with the IMM and a schedule of the one-day lecture plus assessment dates and the Training Facility location will be advised by the IMM.

Graduate Blasters who have acquired painting skills and wish to sit for the Painter Assessment must complete the log-book over a 12-month period prior to the examination showing proof of their experience. The same procedure applies to Graduate Painters who wish to sit for the Blaster Assessment. All Graduates must keep a record of their work in a Job Development Record Book as their certification is valid for five years only. Proof of continuous working experience without a lapse of more than 18 months will entitle the Graduates to automatic re-certification for another five years. However, Graduates must also register as an IMM member during the five-year period. Otherwise, certification period shall be based on IMM membership period.

TYPICAL TEST PIECE (MILD STEEL) FOR PRACTICAL ASSESSMENT

Round pipe / I-Beam / Angled Plates ; preferably with welded sections/attachments

Abrasive blast to SA 2.5 and coat with 2-pack coating.

TRADE ASSESSMENT

After the completion of the theoretical section, the candidate will be assessed through two parts :-

Part 1:

A theory assessment consisting of :-

(i) True/False & Objective Questions = 100 %
(For Blasters)

(iii) True/False & Objective Questions = 100 %
(For Painters)

Part 2:

A practical assessment consisting of :-

(ii) Blasting skills = 100%

(iv) Painting skills = 100%

Adding the percentage values from Part 1 & Part 2 and averaging them, the grading of candidates will be as follows:-

70% - 100% = Certified Protective Coatings Technician

Level 1 (Blaster) for Part 1(i) & Part 2(ii)

Level 1 (Painter) for Part 1(iii) & Part 2(iv)

Level 2 (Multi-skill) for Part 1(i)+(iii) & Part 2(ii)+(iv)

< 70% = FAIL

ASSESSMENT LOGBOOK

Graduate Blasters who have acquired painting skills and wish to sit for the Painter Assessment must complete a Logbook over a 12-month period prior to the examination date showing proof of their experience. The same procedure applies to Graduate Painters who wish to sit for the Blaster assessment.

JOB DEVELOPMENT RECORD BOOK

All Graduates will be issued a "Job Development Record Book" which will be used for re-certification purposes. Should a candidate's record book show that there has been a lapse of more than 18 months without working as a blaster or painter, the candidate will have to re-sit the one-day assessment for re-certification, while other candidates who have continuous relevant experience will be automatically re-certified after 5 years.

VALIDITY OF CERTIFICATION : 5 YEARS maximum. Graduates must register as an IMM member for the certification period.

LOCATIONS OF TRAINING

At selected "Training Facility" throughout Malaysia. (All "Training Facility" shall be defined to include lecture room, lecture notes, audio-visual aid, test pieces for practical assessment, blasting & painting equipment, paint materials, abrasives and consumables, plus tea/refreshments and lunch for the candidates and trainers/assessors/invigilators. The IMM will provide one master set of the lecture notes for the "Training Facility" Provider to make sufficient copies for the candidates.)

PROGRAMME

8:00 a.m. - 10:30 a.m.	Theory lectures
10:30 a.m. - 10:45 a.m.	Tea/Coffee
10:45 a.m. - 11:30 a.m.	Theory lectures
11:30 a.m. - 12:30 p.m.	Theory Assessment Test
12:30 p.m. - 1:30 p.m.	Lunch-break
1:30 p.m. - 3:30 p.m.	Practical Assessment
3:30 p.m. - 3:45 p.m.	Tea/Coffee
3:45 p.m. - 6:00 p.m.	Practical Assessment

TRAINING SCHEDULE

The lectures and practicals will be conducted at the selected "Training Facility" throughout Malaysia. Each session will be limited to 12 candidates. Upon receipt of registrations of candidates, the IMM will inform the candidates of the trainers' names, training date and venue. All candidates are required to equip themselves with their work uniform and safety gears for the assessment.

CANDIDATE ELIGIBILITY

Candidates should have 2 years of blasting and/or painting experience. Candidates with less than 2 years experience must submit a testimonial from employer or client to demonstrate their eligibility. The decision to accept candidates will be made by the IMM.

LANGUAGE

The lectures and assessments will be conducted in English or Bahasa Malaysia. Where a candidate cannot read or write, the examiners shall conduct the assessment orally and record the results. Candidates must advise their preferred choice of language at the time of registration.

COURSE SYLLABUS

1. HOW TO READ PRODUCT TECHNICAL DATA

The prime importance before painting is to know the nature of paint. All necessary information can be easily gathered from the product technical data. The following should be covered: generic type of product, volume solid, surface preparation required, recommended spray equipment, drying time, mixing ratio, type of thinner etc.

2. SURFACE PREPARATION

Mechanisms which determine the bonding / adhesion of protective coating to substrate. Only methods (STANDARD) being specified in painting specification to be discussed in term of the equipment, abrasive and achievable surface quality. In addition, site protection and setting up of wind breaker are important. How to handle sharp edges and weld seam? How to clean oil or grease contaminant?

3. PAINT DRYING MECHANISM

Candidate to be exposed to three major paint drying mechanism : OXIDATION, PHYSICAL and CHEMICAL REACTION. The common defects related to the nature of drying mechanism.

4. USE OF VOLUME SOLID

Definition of volume solid. Candidate should be exposed to the calculation of wet film thickness required for a particular Dry Film Thickness and the theoretical and practical coverage per litre of paint.

5. WHAT IS MIXING RATIO

Definition of mixing ratio. The importance of correct measured ratio in small mixing.

6. FUNCTION OF THINNER

Definition of Thinner. The function of thinner.

7. WHAT AFFECT DRYING TIME

Factors affecting the drying time in term of product nature, substrate and external environment.

8. POT LIFE AND SHELF LIFE

Definition and what is the difference between the two. How it affect the painting process and coating performance. Proper storage condition and handling of paint stocks.

9. APPLICATION METHODS

Technique used to prepare and mix paint for application to the substrate. Methods of paint application and equipment set up.

10. HOW TO GET CORRECT WET FILM THICKNESS ??

How to get even WFT by various application methods? Stripe coating.

11. WASTAGE ?? HOW TO MINIMIZE

This issue is to look into from five angles :

- i) Substrate dimension
- ii) Mixing of paint
- iii) Application methods
- iv) Equipment used
- v) External condition

12. COMMON SITE DEFECTS AND REMEDY

The following common site defects to be discussed :

sagging, dry spray, low thickness, orange peel, wavy, not dry, pinpoint rust, delamination, mud cracking etc.

13. QUALITY CHECK AND INSPECTION TOOLS

The condition check before blasting and painting which include Relative Humidity, Steel Temperature, Dew point, substrate surface quality etc. QC check on paint work including visual appearance and Dry Film Thickness.

14. SAFETY PRECAUTION

Personal protection equipment (PPE) for surface preparation, during paint mixing, painting. Safety in confined spaces. Emergency procedure.

REGISTRATION OF CANDIDATES

	<u>Registration Fee</u>	<u>Blaster Assessment Fee</u>	<u>Painter Assessment Fee</u>
IMM Member	RM500.00	RM50.00	RM50.00
Non-Member of IMM	RM600.00	RM80.00	RM80.00

All candidates are encouraged to join the Institute of Materials, Malaysia (IMM)

SEND REGISTRATION TO:-

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40460 Shah Alam, Selangor Darul Ehsan. Malaysia.

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Tel/Fax : 03-5226352(DL)

Attention: Mr. Frankie Chua
Head, IMM Coatings Subcommittee
(Direct Tel. Contact : 03-80604584)
or
Puan Rohaya Rahim
Admin. / Training Executive

For company-sponsored candidates trained & assessed at in-house Training Facility, a rebate of RM200.00 will be reimbursed to the sponsoring company.

IMM TRAINERS/ASSESSORS FOR PROTECTIVE COATINGS & CERTIFICATION SCHEME

IMM TRAINERS/ASSESSORS

ITEM	TITLE	NAME	COMPANY	TEL	FAX
1.	MR.	TELAJAN LUYOH	TELAGA MANAGEMENT SERVICES	085-659564	085-659564
2.	MR.	LOW KEH TEONG	JOTUN (M) SDN BHD	03-55421150	03-55421207
3.	MR.	PANNIRCHELVAM	INTERNATIONAL COATINGS S/B	07-2541118	07-2514775
4.	CIK	MASHITAH BINTI YEOP	EURONAVY (M) SDN BHD	03-61873700	03-61873699
5.	MR.	ALBERT LEE PHIAW SEONG	JOTUN (M) SDN BHD	03-55421150	03-55421207
6.	MR.	KRISHNAN SINNAPAYAM	AUTOBLAST SDN BHD	03-7035454	03-7037854
7.	MR.	FRANKIE CHUA	PLC LABORATORY	03-80604584	03-80604676
8.	EN.	MOHD ANIQ @C. NAGENDRAN	SIME SEMBAWANG	07-2512901	07-2514267
9.	MR.	CHONG CHENG YOON	VITAL INNOVATION S/BHD	03-56249448	03-56371478
10.	MR.	KOK WAI CHEE	DUPLEX TECHNOLOGY S/B	03-56244924	03-56362227
11.	EN	AZNAN BIDIN	BREDERO PRICE (M) SDN BHD	09-5833131	09-5833336
12.	EN	HAHARAI SERHOOD	MALAYSIA SHIPYARD ENG	07-2521111	07-2513890
13.	EN	WAHAB	MALAYSIA SHIPYARD ENG	07-2521111	07-2513890
14.	MR.	MARTIN ANTHONY	MALAYSIA SHIPYARD ENG	07-2521111	07-2513890
15.	EN	NAZARUDDIN B. AD. AZIZ	MALAYSIA SHIPYARD ENG	07-2521111	07-2513890
16.	MR	PETER SEBASTIAN	MALAYSIA SHIPYARD ENG	07-2521111	07-2513890
17.	MR	YEOH TIAN HOCK	IMET RESOURCES SDN BHD	03-33421413	03-33423050
18.	MR	PETRUS LANONG	INTERNATIONAL COATINGS	085-655650	085-655696
19.	MR	ROBERT LO	BERGER INTERNATIONAL S/BHD	03-33928622	03-33920839
20.	MR	SELA RANGGAW	DAYANG ENTERPRISE	085-428185	085-421654
21.	MR	DANA DUGAT	SARAWAK SHELL BERHAD	086-852149	086-852227
22.	EN	SHARKAWI OTHMAN	AIKINMAS SDN BHD	086-334460	086-311659
23.	MR	ADRIAN D'CRUZ	HEMPEL COATINGS SDN BHD	03-7453037	03-7456016
24.	MR	WONG SIONG PIN	JOTUN (M) SDN BHD	085-417211	085-417211

IMM INVIGILATORS

ITEM		NAME	COMPANY	TEL	FAX
1.	EN.	MOHD ADAHAM B. ABDULLAH	PETRONAS CARIGALI SDN BHD	085-475630	085-475380
2.	MR.	ROLAND FONG	INTERNATIONAL COATINGS (M)	03-56330125	03-56331270
3.	IR.	MOHD. SURADI YASIN	PETRONAS	03-5814960	03-2073194
4.	MR.	DAVID LIM CHEE CHEONG	ESSO PRODUCTION (M) INC	03-3802908	03-2033453
5.	MR.	GEORGE JAMES ANUNG	SARAWAK SHELL BERHAD	085-452484	085-454919
6.	MR.	KANG KIM ANG	VCI(M) SDN BHD	03-7450448	03-7450418
7.	DR.	ESAH HAMZAH	UNIVERSITI TEKNOLOGI MALAYSIA	07-5504562	07-5566159
8.	EN.	ZAINUDDIN ISHAK	HAVEN CORROSION ENGINEERING	03-55198229	03-55198361
9.	EN.	MOHD. RAZIFF EMBI	TEKNIK JANAKUASA SDN BHD	03-2523388	03-2548757
10.	PN.	MAIMUNAH ISMAIL	SARAWAK SHELL BHD	085-454686	085-454919
11.	EN	MOHD SULASTRY SALLEH	ESSO PRODUCTION MALAYSIA INC	09-8654611	09-8654712
12.	EN	RAJA ZAHIRUDDIN	PETRONAS CARIGALI SDN BHD	09-8640722	09-8640855
13.	EN	AZHAR ABDUL LATIF	MALAYSIA SHIPYARD ENG	07-2521111	07-2513890
14.	DR	AHMAD MAHIR MAKHTAR	UNIVERSITI TEKNOLOGI MALAYSIA	07-7162443	07-5566157
15.	MR	BARRY LOI CHEE CHIEN	MPE LINDUNG SDN BHD	03-5218228	03-521616
16.	DR.	EDWIN JONG	SARAWAK SHELL BERHAD	085-453297	085-454187
17.	MR	TAN CHUAN BEE	MALAYSIA LNG SDNBHD	086-251301	086-252069
18.	MR.	HARRY WOON	BREDERO PRICE (M) SDN BHD	09-5833131	09-5833336

Enquiries can be directed to anyone of the above regarding this programme.

REGISTRATION FORM

IMM PROTECTIVE COATINGS TECHNICIAN COMPETENCY CERTIFICATION

REGISTRATION FEES

	<u>Registration Fee</u>	<u>Blaster Assessment Fee</u>	<u>Painter Assessment Fee</u>
IMM Member	RM500.00	RM50.00	RM50.00
Non-Member of IMM	RM600.00	RM80.00	RM80.00

We are pleased to register the following personnel:

Item	Name of Candidate	Sex	I.C. / Passport No. *	Age	Blaster	Painter	Language	Fees (RM)

* Photocopy of I.C./Passport to be submitted.

3 nos. of passport-size photographs to be submitted for each candidate.

IMM membership applications can be submitted together with this registration form.

To submit Blaster/Painter Personal & Qualification Records (see overleaf) for each candidate.

ALL CHEQUES/BANK DRAFTS TO BE MADE PAYABLE TO THE "INSTITUTE OF MATERIALS, MALAYSIA" & INCLUDE 50 SEN FOR OUTSTATION CHEQUES

ORGANIZATION NAME: _____

IMM MEMBERSHIP NUMBER : _____

ADDRESS: _____

TEL: _____ FAX: _____

CONTACT PERSON: _____

DESIGNATION: _____ SIGNATURE : _____

DATE OF REGISTRATION : _____ PROPOSING TRAINING DATE: _____

Affix
Photo
Here



BLASTER/PAINTER PERSONAL & QUALIFICATION RECORD

(Photocopy extra copies for each candidate)

1. Name: _____
2. I.C./ Passport No: _____
3. Academic Qualification (if any): _____
4. Nationality: _____ Race: _____
5. Sex: Male/ Female * Date of Birth: _____ Age: _____
6. Current Personal Skill: BLASTER / PAINTER * (IMPORTANT)
7. No. of years of experience: _____ 10. Language: _____
8. Location of Work: _____
9. Familiar with Paint System such as (Pls specify): _____
10. Knowledge on Paint applications * :
Airless Spray : Yes / No
Conventional Spray : Yes / No Paint Brush : Yes / No
Other Special Application Mode: _____
11. Familiar with Surface Preparation * :
Manual Cleaning : Yes / No
Dry Blasting : Yes / No Garnet / Slag : Yes / No
12. Employer's name: _____
13. Proposing Training Date : _____ Venue : _____

Certified by: _____

Date: _____

QA/QC Dept.

Name : _____

Designation : _____

* Delete whichever not applicable.

FOR OFFICIAL USE

Verified by :

Verified by :

.....
(Examiner)

.....
(IMM Observer)

CATHODIC PROTECTION

Training and Certification

CP TECHNICIAN LEVEL 1

What does the training course fee cover?

- ☞ Exam fee
- ☞ Hands-on practicals
- ☞ Transport to site
- ☞ Written examination
- ☞ 12-month Logbook

What needs to be submitted before I am accepted for the course?

You shall need to submit your registration with supporting evidence of your educational and working experience for verification.

Send your registration & payment to the respective Activity Organisers:

PENINSULAR MALAYSIA

GADING INSTITUTE SDN BHD (428531-K)

85-2 & 87-2, Changkat Thamby Dollah



Off Jalan Pudu 55100 KUALA LUMPUR

Tel: 03-21416300 Fax: 03-2141 9053

Email: gading99@tm.net.my

SARAWAK & SABAH

TELAGA MANAGEMENT SERVICES

Lot 600, 2nd Floor, Block 7

Petita Commercial Centre

98000 Miri, SARAWAK

Tel: 085-659564 Fax: 085-659564

EMPHASIS AND APPLICABILITY

Upon successful completion, the certified person should be capable of going to the field and accomplishing the periodical surveys required by a cathodic protection (CP) programme. CP Level 1 technicians should have a basic understanding of corrosion fundamentals and sufficient troubleshooting skills to take care of minor problems within a CP system.

Course Outlines

- Corrosion Fundamentals
- Cathodic Protection Fundamentals
- Field Measurements
- Stray Current Identification
- Installing Cathodic Protection Components

- Troubleshooting
- Written Examination
- Practical Examination

Note: Above contents exclude "Design of Cathodic Protection System".

Recommended Pre-requisites

6 months cathodic protection work experience **PLUS** completed SPM or its equivalent.

Condition for Certification:

1. Participant must have successfully passed the theory & practical exams and completed the 12-month logbook exam.
2. Certification is for 5 years and successful graduates must subscribe the years IMM-membership in advance.

Please tick (✓)	INTAKE	LOCATION
	10-14 Sep 2001	Miri
	17-21 Sep 2001	Kuala Lumpur/Petaling Jaya
	17-21 Oct 2001	Miri
Time	: 8.30 am – 5.00 pm	
Fee	: a) IMM Member : RM3,025.00 Non-Member: RM3,125.00 : b) Early bird fee: RM2,750.00 (for registration & fee received 20 days the before course commencement date. Cheques shall be made payable to the "INSTITUTE OF MATERIALS, MALAYSIA".	

REGISTRATION FORM

Name:.....

Company:.....

Address:.....

.....

..... E-mail:.....

Tel:..... Fax:.....

Contact person:..... Designation:.....

Signature:..... Date:.....



Institute of Materials, Malaysia (ROS Reg no. 4186/87)
Lot 1908, Batu 7, Jalan Bukit Kemuning
40460 Shah Alam, Selangor Darul Ehsan, Malaysia.
Tel: 03-5218228 / 03-5226352 Fax: 03-5219413/5216116

INSTITUTE OF MATERIALS, MALAYSIA
(Formerly the Malaysian Materials Science & Technology Society)

The Malaysian Materials Science & Technology Society (MMS) was registered with the Registrar of Societies on 6th November, 1987. The MMS was actively promoting the awareness of Materials in Malaysia since 1988. In 1996, with a newly-elected Council, the change of name to the Institute of Materials, Malaysia (IMM) was submitted to the Registrar of Societies and approved on 16th June 1997. The new name was to be synergistic with the rest of the world. For example in the case of the United Kingdom, The Institute of Metals, The Institute of Ceramics and The Plastics & Rubber Institute were merged into a single Institute of Materials in 1992 where its Members are recognised as professionals with the status of a Chartered Engineer (C.Eng).

Membership to the IMM is open to all individuals and companies interested in developing the contribution of Materials science, technology and engineering towards industrial growth in Malaysia. The technology of Materials is advancing day-by-day throughout the world. We, in Malaysia, must keep up with the pace of technological advancement.

The objectives of the IMM include the training and development of individuals and companies in Malaysia to attain professional recognition in various fields of Materials science, technology and engineering. Materials cover a very wide field such as metals, polymers, rubber, wood, concrete, ceramics, semiconductors, advanced materials, cellulose, textiles, etc. Membership to the IMM will enable networking and exchange of knowledge from a very wide variety of specialized areas of expertise.

The longterm objective of the IMM is to attain professional status for its members in line with that which is accorded to the other disciplines of engineering.

The IMM is also committed to seeking affiliations with overseas Materials and Engineering/Scientific professional institutions to gain access to technological developments worldwide. This will ensure that we, in Malaysia, will not be left behind.

MEMBERSHIP APPLICATION FORM

(Confidential)

AFFIX
PHOTO
HERE

APPLICATION FOR COMPANY MEMBER/ORDINARY MEMBER/STUDENT MEMBER*
(Only Ordinary Members can apply for upgrade to Associate Member/Professional Member/Fellow Member.
Please request for the relevant application form from the IMM Secretariat)

(I) FOR ORDINARY MEMBERSHIP (STUDENT MEMBERS ALSO TO FILL UP THIS PART)
PERSONAL PARTICULARS (photocopy of I.C./Passport to be submitted)

NAME IN FULL (MR/MS/DR/.....): _____
(BLOCKS LETTERS)

RESIDENCE/POSTAL ADDRESS : _____

TELEPHONE NO : HOUSE _____ HANDPHONE NO: _____

PLACE OF BIRTH : _____ DATE OF BIRTH : _____

NATIONALITY : _____ PASSPORT/I.C. NO : _____

NAME OF EMPLOYER/COMPANY

TITLE OR POSITION : _____

ADDRESS : _____

TELEPHONE NO

FAX NO :

E-mail :

(II) COMPANY MEMBERSHIP (COMPANY PARTICULARS)

COMPANY NAME: _____

COMPANY REGISTRATION NUMBER: _____

ADDRESS : _____

TELEPHONE NO :

FAX NO:

E-mail NO : _____

PRINCIPAL
REPRESENTATIVE
(MR/MS/DR/.....) :

ALTERNATE
REPRESENTATIVE
(MR/MS/DR/....) :

AFFIX
PHOTO
HERE

AFFIX
PHOTO
HERE

POSITION:

POSITION:

(III) FOR STUDENT MEMBERSHIP ONLY

COURSE OF STUDY : _____

YEAR OF STUDY : _____

NAME OF UNIVERSITY/COLLEGE : _____

ADDRESS : _____

TELEPHONE NO _____

FAX NO: _____

The above student is allowed to join the Institute

Signed : _____

Name : _____

Designation : _____

University/College Chop

Date: _____

INDICATE INDUSTRY INVOLVED OR INTERESTED IN :-

METALLURGY

()

CORROSION PROTECTION

()

MATERIALS FAILURE

()

COMPOSITE MATERIALS

()

MATERIALS DESIGN

()

CONCRETE TECHNOLOGY

()

MATERIALS RESEARCH

()

WOOD TECHNOLOGY

()

POLYMER TECHNOLOGY

()

EDUCATIONAL INSTITUTION

()

CERAMICS TECHNOLOGY

()

OTHERS (SPECIFY) _____

WELDING

()

I/We hereby accept responsibility for the accuracy of the particulars contained in this application form.

Date : _____

Signature : _____

(and Company Stamp)

Proposer : _____

Seconder : _____

Name : _____

Name: _____

Membership Grade & No: _____

Membership Grade & No: _____

* Delete whichever not applicable.

NB : If proposer and seconder cannot be sourced, mail this form to the Secretariat for assistance.

ENCLOSED IS MY/OUR CHEQUE/BANK DRAFT/MONEY ORDER NO: _____

FROM BANK _____

FOR THE AMOUNT OF _____

RM _____

**Institute Bahan Malaysia
(Institute Of Materials, Malaysia)
General Rules on Memberships**

The Council shall establish a Memberships Committee which will be responsible for review of applications for transfer of membership grades. The Memberships Committee shall recommend transfers for Council approval at Council Meetings. All grades of memberships are awarded at the discretion of the Council and may be withheld or withdrawn in the event of conduct likely to prejudice the standing of the Institute. Every member shall receive a membership certificate.

The Memberships Committee shall be responsible for drafting the "Regulations Governing Admission and Transfer of Member Grades" for Council approval. Such regulations may be changed from time to time subject to Council approval.

Every application for membership shall be proposed and seconded according to these regulations and shall be forwarded to the Honorary Secretary who shall, at the first convenient opportunity, submit it to the Council for approval. The Council may at its discretion reject any application without assigning any reason thereof.

Each company on admission shall be entitled to nominate one representative to exercise all rights of membership. Only representatives of Company membership, Fellows (F.I.M.M.), Professional Members (M.I.M.M.), and Ordinary members shall have the right to vote and to hold office in IMM.

Only Malaysian Citizens, and Blue Identity Card Holders can become Ordinary Members, Associate Members (A.M.I.M.M.), Professional Members (M.I.M.M.) and Fellow Members (F.I.M.M.) with voting rights. Foreigners and Red Identity Card Holders can join similar grades but shall have no voting rights.

Grades

Honorary Fellow (Hon. F.I.M.M.)

The Council shall have the power to elect Honorary Fellows who shall be persons of eminence in science or industry. The election shall be based on a majority vote within the Council. Honorary Fellows shall enjoy such privileges as may from time to time be determined by the Council.

Fellow (F.I.M.M.)

A person at least 35 years of age with approved academic qualifications, training and 8 years relevant responsible experience who has made significant contributions to the science and practice of profession of Materials Science and Engineering or has given distinguished service to industry or education.

Professional Member (M.I.M.M.)

A person at least 25 years of age, with approved academic qualifications and training, having at least 3 years responsible experience in Materials Science and Engineering. OR A person at least 40 years of age, with at least 15 years of experience with practical responsibility, as demonstrated by thesis/dissertation or report and interview.

Associate Member (A.M.I.M.M.)

A person at least 25 years of age, who possesses an interest in Materials Science and Engineering but have acquired the necessary experience or obtained the qualifications governing entry to Member grade. An Associate Member, on obtaining the necessary qualifications, may apply for transfer to Member grade.

Company Member

Any company that is involved or has interest in Materials Science and Engineering will be qualified to join as a company member.

Ordinary Member

Any person above the age of 18 years engaged in activities related to research, development and applications in Materials Science and Engineering shall qualify for Ordinary Membership. Only Ordinary Members who meet the necessary minimum requirements may apply for transfer to membership grades of Fellow, Member and Associate Member and may use the abbreviated titles upon transfer.

Student Member

A student member shall be a person not under 17 years of age who at the time of application satisfies the Council that he has received a good general education and is studying subjects related to Materials Science or Engineering. A student member shall transfer to the grade of Ordinary Member **after graduation** provided he or she is suitably qualified and as soon as he or she is earning a full-time salary. A Student shall not become a member of the IMM without the prior approval of the Vice-Chancellor or Head of Institution of the university or relevant authority concerned.

Certificate of Membership

Every member shall receive a membership certificate.

Every application for membership shall be proposed and seconded by two existing ordinary members and shall be forwarded to the Honorary Secretary who shall, at the first convenient opportunity, submit it to the Council for approval. The Council may at its discretion reject any application without assigning any reason thereof.

Each company on admission shall be entitled to nominate one representative to exercise all rights of membership. Only representatives of Company membership and Ordinary members shall have the right to vote and to hold office in IMM.

SCHEDULE OF FEES

	Entrance Fee	Processing Fee	Transfer Fee	Annual Subscription
Company Member	RM50.00	-	-	RM200.00
Ordinary Member	RM20.00	-	-	RM 20.00
Fellow (F.I.M.M.)	-	RM300.00	RM10.00	RM 70.00
Member (M.I.M.M.)	-	RM150.00	RM10.00	RM 50.00
Associate Member (A.M.I.M.M.)	-	RM150.00	RM10.00	RM 30.00
Student Member	RM10.00	-	-	RM 5.00

NB : ALL PAYMENT TO BE MADE OUT BY CROSSED CHEQUE, BANK DRAFT, OR MONEY ORDER TO "INSTITUTE OF MATERIALS, MALAYSIA". ALL APPLICATIONS MUST BE ACCOMPANIED BY THE APPROPRIATE PAYMENTS. APPLICATIONS MADE BETWEEN JULY AND DECEMBER NEED TO PAY 50% OF THE ANNUAL SUBSCRIPTION.

Annual subscriptions shall be payable in advance on 1st January of each year. Any person who is admitted into the IMM between 1st July and 31st December in any year shall pay only half the annual subscription.

ADVERTISING IN IMM NEWSLETTER

	Black/ White	Full Colour
Inside front cover	-	RM2,000.00
Inside back cover	-	RM1,800.00
Outside back cover	-	RM2,500.00
Inside pages	RM800.00	RM1,500.00
Special loading request : RM300.00 (8 mm X 6 mm)		

Advertisement details are as follows :

- Printing is normally in black & white by the Offset method.
- The advertisement size will be approximately 8 1/4" x 11 3/4" or 20.7 cm x 29.5 cm.
- You need only to supply a good printed copy of the advertisement. However for better reproduction it would be best either to loan us the artwork or alternatively supply us with a good bromide print or photographic film of the advertisement. For coloured advertisement please also provide the colour separation together with a sample of the print-out.
- Two complimentary copies of the Newsletter would be despatched upon publication.

All payment to be made to " **Institute of Materials, Malaysia**" prior to publication.

PROGRAMME

DAY 1

8.00 am Registration
8.30 am Opening Remarks
8.45 am CORROSION FUNDAMENTALS
10.00 am Tea Break
10.15 am Continuation CORROSION FUNDAMENTALS
12.30 pm Lunch Break
1.30 pm PAINT TECHNOLOGY
3.00 pm Tea Break
3.15 pm Continuation PAINT TECHNOLOGY
5.00 pm End of classroom session

DAY 2

8.00 am SURFACE PREPARATION
10.00 am Tea Break
10.15 am APPLICATION OF PAINT
12.30 pm Lunch Break
1.30 pm COATING SELECTION
3.00 pm Tea Break
3.15 pm Continuation COATING SELECTION
Practical exercises in presenting painting specifications
5.00 pm End of classroom session

DAY 3

8.00 am COATINGS FAILURES
10.00 am Tea Break
10.15 am COATING REPAIR AND MAINTENANCE
12.30 pm Lunch Break
1.30 pm Visit to a Blasting/Painting yard to practise the USE OF TEST AND INSPECTION EQUIPMENT
(Participants are requested to wear protective clothing and provide their own helmets, boots and goggles during visit to the yard.)
5.00 pm End of session

DAY 4

8.00 am SAFETY AND QUALITY ASSURANCE
10.00 am Tea break
10.15 am THE ROLE OF THE COATINGS INSPECTOR
12.30 pm Lunch break
1.30 pm INTRODUCTION OF THE LOGBOOK SCHEME
2.00 pm EXAMINATION
This is an examination in which the participants will have to complete multiple choice and essay type questions. Participants may use their notes, resource texts and their own text-books to complete this examination.
4.00 pm End of Examination
5.00 pm Graduation and Closing Remarks



presents

COATINGS INSPECTOR CERTIFICATION SCHEME

AUGUST 2001

Date : 16-19 Aug 2001
Venue : Miri, Sarawak

OCTOBER 2001

Date : 23-26 Oct 2001
Venue : Pakai/Kuantan

OCTOBER 2001

Date : 18-21 Oct 2001
Venue : Miri, Sarawak

Activity Organisers

SARAWAK

TELAGA MANAGEMENT SERVICES

Lot 600, 2nd Floor, Block 7

Pelita Commercial Centre

98000 Miri, SARAWAK

Tel: 085-659564

Fax: 085-659564

PENINSULAR MALAYSIA



GADING INSTITUTE SDN BHD (428531-K)

Changkat Thamby Dollah,

Off Jalan Pudu

55100 KUALA LUMPUR

Tel: 0 3-2141 6300 (4 lines)

Fax: 03-2141 9053

Email: gading99@tm.net.my

INTRODUCTION

The Institute of Materials, Malaysia (formerly MMS - Malaysian Materials Science and Technology Society) was established to promote Materials Science and Engineering in Malaysia and the surrounding region.

The staggering costs of the deterioration of materials by corrosion, erosion, chemicals, UV rays and the effects of the severe weather conditions prevailing in tropical countries can be drastically reduced by the use of protective coatings.

To ensure efficient and cost-effective protection, a coating has to be properly applied on adequately prepared surfaces. Here the coatings inspector plays an all important role.

To be able to resolve existing and future problems, the coatings inspector needs knowledge of the physical and chemical processes involved and must have an understanding of the practical problems he/she may face in the field. He/she must be able to use alternative techniques and materials and must therefore be well informed of the latest technological developments in the protective coating field.

There is an urgent need for a scheme adapted to the conditions in S.E. Asia and to upgrade individuals in coating inspection and quality control.

The IMM Coatings Inspector Certification Scheme fulfills this need. The Scheme will equip the candidate with the knowledge and skills to demand sufficient authority for his/her decisions to be recognised by both client and contractor.

Graduates are in demand not only as coating inspectors but as technical service personnel with paint companies and as quality controllers with oil, gas and construction organisations.

They are able to ensure that the standard and efficiency of painting projects is increased and that down-time and sub-standard work are kept to a minimum.

An investment in training in Coatings Inspection will pay rich dividends in increased productivity and profit for the company and enhance career prospects for the graduate.

THE SCHEME

The IMM Coatings Inspector Certification Scheme is held over 4 days which includes lectures (22 hours) and an open-book examination (2 hours) followed by a logbook scheme. Candidates are required to complete the logbook which consists of project assignments by which the candidates will get on-the-job experience. It is expected that the candidates complete the logbook within 6 months.

REGISTRATION IMM-COATINGS INSPECTOR CERTIFICATION SCHEME

FEES

Fee		Award
*Early bird	IMM Member	IMM - Coatings Inspector Course
RM2,900	RM3,190.00	
	Non-	
	RM3,340.00	

*To be eligible for early bird fee, registrations & payments must reach the activity organiser not less than 20 days before course commences. Payments to be made payable to the 'INSTITUTE OF MATERIALS, MALAYSIA' & include 0.03% commission for every outstation cheque.

INTAKES

No:	Date	Location	No:	Date	Location
1	16-19 Aug '01	Miri, Sarawak	3	18-21 Oct 01	Miri, Sarawak
2	23-26 Oct '01	Paka/Kuantan			

Yes, please register the following for the course:

Name of Candidate	Designation	Intake No:

WITHDRAWAL FROM COURSE

- If notice is given in writing more than 2 weeks BEFORE COMMENCEMENT of the course, a full refund will be made.
- If notice is given in writing WITHIN 2 weeks preceding the commencement of the course, a 75% refund will be made.
- If notice is given in writing AFTER the commencement of the course, no refund will be made.

Organisation name:

Address:

Tel:

Fax:

Contact person:

Designation: Signature:

Send your payment or registration to the respective **ACTIVITY ORGANISERS**.

TELAGA MANAGEMENT SERVICES

Lot 600, 2nd Floor, Block 7
Pelita Commercial Centre
98000 Miri, SARAWAK
Tel: 085-659564
Fax: 085-659564

GADING INSTITUTE SDN BHD (478531-K)

Changkat Thamby Dollah
Off Jalan Pudu
55100 KUALA LUMPUR
Tel: 0 3-2141 6300 (4 lines)
Fax: 03-2141 9053

PRINCIPAL LECTURER

Mr. Erroy Vogelpoel is a Senior Lecturer in Coatings Technology and Coatings Inspection at the Sunraysia Institute of Technical and Further Education, Victoria, Australia. In addition, he is presently employed by TAFE International Training Services as Manager-South East Asia.

Erroy joined the paint industry in 1977 and was employed as Technical Service Manager by various paint companies in Australia, Malaysia, Singapore and Brunei.

In that period, he was in charge of quality control of the whole coating and/or re-coating processes of many large projects, the most notable ones being Brunei Shell's largest offshore platform Champion 7, the new palace of the Sultan of Brunei, the Istana Nurulizma and the giant Shell-Mitsubishi-Petronas Middle Distillation Plant in Bintulu, Sarawak.

His extensive practical experience in coating inspection was noted by the petrochemical and multinational construction companies and on many occasions he was seconded as an independent inspector/quality controller to large projects in South east Asia.

In the last 17 years, Erroy has been actively involved in the development of a number of Coatings Technology and Coatings Inspection courses for TAFE. He has personally conducted more than 50 courses in coating inspection, coating technology, corrosion control, blasting and painting in Australia, Malaysia, Singapore and Brunei. These courses were well attended by participants from Shell, Petronas, Esso, SIRIM and the large paint manufacturing companies.

To support his lectures, Erroy has written comprehensive course notes and student resources on all aspects of coating processes. He has also produced several "Inspection Manuals" for corrosion consultants and contractors to use in their in-house training courses.

IMM COATINGS SUB-COMMITTEE

Head	Mr. Frankie Chua (PLC Laboratory)	Tel : 03 - 8060 4584 HP : 012- 307 8328 E-mail: frankie@plc.com.my
Deputy Head	Mr. K. Krishnamurthy (LCS Engineering)	Tel : 03 - 7877 1095 HP : 012- 283 1095 E-mail: lesvk@tm.net.my
Secretary	Mr. Alexander Gabriel (Guardian Composite)	Tel : 03 - 7747 5357 HP : 012- 228 2645 E-mail: alexg@pop.jaring.my

CONTENTS

1. Corrosion Fundamentals
2. Paint Technology
3. Surface Preparation
4. Application of Paint
5. Coating Selection
6. Coating Failure
7. Coating Repair and Maintenance
8. The Use of Test & Measuring Equipment
9. Safety & Quality Assurance
10. The Role of a Coatings Inspector

ACCREDITATION & CERTIFICATION

Having successfully completed the logbook scheme, participants must then register as IMM members for 5 years to be eligible to become IMM Certified Coatings Inspectors. The IMM Coatings Inspector Certificate is recognised by industries in Malaysia.

Accreditation is for a period of five years. To renew their certification, Certified Coatings Inspectors will have to attend 5 IMM courses and maintain a job logbook during the 5 years. Format of the logbook can be obtained from the IMM Secretariat. Re-accreditation is for a period of another five years.

WHO SHOULD ATTEND

The IMM Coatings Inspector Certification Scheme has been developed to train individuals in the protection of iron and steel against atmospheric and marine corrosion by paints and paint coatings in the severe climatic conditions prevailing in Malaysia and the surrounding ASEAN countries. This certification scheme also deals with the protection of other construction materials such as concrete, brick and timber.

COURSE AIMS

The course aims to provide the participants with the knowledge and skills to efficiently and effectively:

- specify protective paint/coating systems to variety of substrates.
- supervise the preparation of substrates prior to painting.
- supervise the application of paint coatings.
- conduct inspections and quality control to satisfy government, industry and union minimum standards.
- communicate in written form.

WELDING INSPECTOR CERTIFICATION SCHEME



100% Course Fee
Reimbursement
from HRDF

September 2001

Date : 24-29 September 2001
Venue : Kuala Lumpur/Petaling Jaya

November 2001

Date : 26-30 Nov 2001
Venue : Miri, Sarawak

Activity Organisers

Sarawak

TELAGA MANAGEMENT SERVICES

Lot 600, 2nd Floor,
Block 7
Pelita Commercial Centre
98000 Miri, SARAWAK
Tel: 085-659564 Fax: 085-659564
Contact person: Theresa Lipah

Peninsular Malaysia



GADING INSTITUTE SDN BHD(428531-K)

85-2 & 87-2, Changkat Thamby Dollah
Off Jalan Pudu
55100 KUALA LUMPUR
Tel: 03-2141 6300 (4 lines)
Fax: 03-2141 9053
Email: gading 99@tm.net.my
Contact persons: Chan Moi Leng &
Cdr. Ir. Raymond

INTRODUCTION

Welding has been with us for almost a century and since the early experimental trials with bare filler rods, great advances in technology have evolved. In today's fabrication and engineering industries, welding has become a very complex subject. It has stood in its own right and highly skilled welding personnel have to meet very strict quality criteria to achieve the approval to ensure that high standards of weld integrity are met on equipment or items that are under high stresses or high operating pressures.

Not only have the artisan personnel to achieve excellence in their welding capabilities, inspection personnel also need to monitor the performance of the welding operatives. On large projects, if welders do not maintain the very high standards for the welding, severe consequences can result by means of the failure of welded connections. Disastrous results have in the past been proven on structures and high pressure piping due to weld failure. Not only are lives lost, but serious financial and environmental consequences can occur.

To maintain and ensure a client's project investment, welding inspectors play a vital role in ensuring that all parameters and welding operatives continually maintain the minimum requirements for producing sound welds. Welding Inspection is an extremely responsible facet to the fabrication and construction industries.

In Malaysia, a vacuum of qualified welding inspectors exists. It has been the norm in the past for fabrication companies to appoint "unqualified" artisan personnel to act as and fill vacant or new welding inspectors positions. This leads to an obvious decline in the quality of welding, thus adding on to the financial costs of the projects due to doubt in integrity and delays in project completion.

IMM WELDING INSPECTOR CERTIFICATION SCHEME

The only qualified welding inspection personnel presently available in Malaysia are the products of overseas institutions from the USA, UK or other similar establishments around the world.

The IMM is now introducing a Welding Inspector Certification Scheme into its programme to achieve Malaysian excellence in the welding industry. The preceding Welding Inspector Certification Course will provide the knowledge and skills to establish a Malaysian Certified Welding Inspector Scheme which is to be at a minimum on par with those from foreign institutions.

THE SCHEME

The Course shall equip personnel with an acceptable welding and fabrication background to acquire the knowledge and expertise. This will enable them to demand sufficient authority for their decisions to be recognized by both client and contractors.

There is a real shortage of qualified welding inspectors in the oil, gas, petrochemical and construction industries. Without doubt, the dividends to industry would be very welcomed in assuring that their plants and structures are being monitored by professional and qualified inspection personnel, thus making substantial savings and providing total integrity to timely completion of projects.

The IMM Welding Inspector Certification Course shall be held over 5 1/2 days, which includes lectures (4 days), laboratory practical (1 1/2 day), practical examination (2 1/2 hours) and written examination (4 hours). The passing marks shall be 70% for every topic of the exams. The candidates shall be required to complete a log book throughout their completed certification, to ensure that they have maintained on the job experience and continually meet the required IMM standards.

The certification shall be renewed after 5 years upon provision of suitable evidence, that the inspector has maintained the satisfactory standard of inspection requirements. All candidates shall be subjected to a retest of the whole course, at the discretion of the approving authority, the IMM Certification and Career Board.

PRE-REQUISITES FOR CERTIFICATION OF WELDING INSPECTOR

- a) Possess fair command of spoken and written English, **and**
- b) Academic qualification and experience:
 - 1) Diploma in welding related or technical science subjects with not less than two (2) years working experience in welding related jobs; **or**
 - 2) Minimum SPM or equivalent with not less than four (4) years working experience in welding related jobs; **or**
 - 3) Lower academic qualification with not less than six (6) years working experience in welding related jobs; **and**
- c) Have passed eye acuity test, with or without corrective lenses, as administered by a medical professional, which consists of near vision acuity test on Jaeger J1 or equivalent at 12" and colour perception tests like the Ishihara Plates. The tests must be current, within 6 months before commencement of course; **and**
- d) Have passed IMM Welding Inspector Course or other IMM accredited course(s).

Reference : IMM Document No. WI-STD-01 **"STANDARD FOR CERTIFICATION OF WELDING INSPECTOR"**

Note : The above document may be purchased from the IMM Secretariat/Activity Organiser at RM 5.00 per set.

COURSE AIMS

The course aims to provide the participants with the knowledge and skills to efficiently and effectively:

- a) conduct inspections and quality control to satisfy government and industry standards.
- b) to monitor and ensure that preparation of weld joints is to stipulated codes and standards.
- c) to ensure that welding personnel meet and continually provide completed weld joints as required by the client's codes and standards.
- d) to ensure that all parameters are maintained during welding operations.
- e) to ensure that the correct consumables are utilized and to make sure that appropriate equipment and techniques are employed to produce weld joints of a high integrity.
- h) to compile proper and concise reports for welding inspection activities.

WHO SHOULD ATTEND

A mandatory course for all individuals who seek certification as IMM Certified Welding Inspectors.

COURSE CONTENTS

MODULE 1: CERTIFIED WELDING INSPECTION

This module consists of 12 lectures delivered in classroom sessions:

1. Responsibilities and Duties of The Welding Inspector

The lecture shall consist of the provision to students, the roles, responsibilities, knowledge and function of the Welding Inspector in relation to weld quality involving the identification of weld discontinuities and the compilation of relevant reports.

2. The Symbols For Welding and Filler Materials

This lecture shall provide students with the ability to identify welding symbols and to understand their significance on engineering and detailed drawings.

3. The Preparation of Welded Joints

In this lecture, students shall be taught the theory of preparing plates and weld joints as required by codes and specifications. The lecture shall teach students to determine the correct joint preparations and weld dimensions in relation to the various welding processes.

4. Procedures and Process for Welding

The students shall learn about the various types of welding and cutting processes, together with the associated equipment and power sources. The lecture shall cover MMAW, GTAW, FCAW, GMAW and SAW processes.

5. Welding Metallurgy

This lecture deals with the effects on mechanical and physical properties of welded joints where the compositions of the weld and base metals interact. It will cover the topic of Hydrogen diffusion, gas/metal reactions, the heat affected zone and solidification rates during welding operations.

6. Residual Stress and Prevention Of Distortion

Students will learn the aspects of distortion in weld joints which are influenced by residual stress and the causes thereof, together with the control of the weldment distortion through heat input control.

7. Heat Treatment To Weld Joints

In this lecture, students will be taught the importance of preheat, maintaining weld inter-pass temperatures and the effects of post heat treatment, together with the ability to observe and supervise the pre and post heat treatment activities.

8. The Welding of Alloys

Covering the present commonly used alloys such as Stainless Steel, Low Carbon Steels, Low Alloy Steels, High Alloy Steels, High Strength Steels and Copper and Nickel Base Alloys, the students shall be taught how to identify the factors concerned with the weldability of these ferrous and non-ferrous materials and the associated effects.

9. Weld Quality Management and Awareness

Students shall through the lecture gain the knowledge of the responsibilities of inspectors, in relation to the quality of the deposition of welded joints and to ensure that they understood and develop skills in identifying weld discontinuities and the prevention thereof.

10. The Designation and Properties of Materials

This lecture shall cover the applicable standards of materials together with highlighting the importance of destructive tests to be used on relevant weldments and their materials.

11. Failure Modes

The student shall be exposed to the defects in parent metals attributed to fatigue, brittle fractures, laminations (lamellar tearing), carbide precipitation and stress corrosion.

12. Inspection And Testing of Welds

This lecture shall provide the student with the knowledge and capabilities of performing visual inspections on welded fabrications, piping and structures in accordance to clientele's codes or stipulated specifications and the correct and proper reporting thereof.

MODULE 2 :

LABORATORY PRACTICAL/DEMONSTRATION

This module shall be conducted in a laboratory and students shall be exposed to the following tests:

- Visual Examination
- Tensile Test
- Fillet Weld Fracture
- Bend Test (Root and Face)
- Nick Break (Charpy Test)
- Macro Examination

ACCREDITATION & CERTIFICATION

Upon successful completion of the course and achieving the minimum examination requirements (passing marks of 70% for every unit), a participant shall become an IMM Certified Welding Inspector and shall be issued with a certificate and an ID card from the IMM, with the condition that he joins as a member of the IMM.

Accreditation shall be for a period of 5 years with IMM membership fees being paid in advance for the 5 years required. To retain his/her certification, a qualified Welding Inspector shall have to provide suitable evidence that he/she has met the satisfactory standard of inspection requirements by maintaining a logbook throughout the 5 years.

The candidate may, at the discretion of the examining board, be required to re-sit the full examination should his/her logbook records fail to meet the minimum required standards.

PRINCIPAL TRAINERS

Dr. LIM CHING LIANG, Ph. D. Metallurgy & Materials Engineering

Dr. Lim is a director of a group of companies dealing with metallurgical consultancy and services. With more than 20 years of hands-on experience, Dr. Lim is actively involved with failure investigations, replica tests and other metallurgy/welding related consultancy work. He also owns a Destructive Mechanical Test Laboratory.

Over the last 10 years, Dr. Lim has been an advisor to contractors of mega projects such as KLCC, KLIA, LRT, Mid Valley City, Oil & Gas projects in Paka, gas pipeline projects and Pergau Dam, just to name a few. As an advisor, he is involved in Welding Procedure Specification (WPS), Procedure Qualification Record (PQR) and Welder Qualification Test (WQT). Dr. Lim is also an active member in numerous professional bodies/associations such as the Institute of Materials Malaysia, National Vocational Training Council (MLVK) and Federation of Malaysian Manufacturers. He is also a part time lecturer for master degree in University Malaysia.

Dr. TEH SER KOK, B. Sc. Metallurgical Engineering & Ph. D. Materials Science

Dr. Teh is the Associate Professor of Materials Engineering Department in Mechanical Engineering Faculty of University Malaysia. He has been involved in the welding industry for more than 20 years. He lectures in welding related subjects, provides technical consultancy for the industry and conducts failure investigations on weld failures.

Dr Teh is active in standards and technical specification work and has been a regular member in many standards and technical committees related to metals and steels, one of which is SIRIM. He is also active in voluntary work in numerous professional bodies/associations. Currently he is a Council Member of the Institute of Materials, Malaysia (IMM) and the Deputy Chairman of the IMM Welding Committee.

Mr. GARRY TOFT, Certified Senior Welding Inspector

Mr. Toft has been stationed in Malaysia in the oil and gas industry for more than 15 years. Most of his experience is in the construction and fabrication sectors. Garry has vast experience in the welding industry, having been employed around the world on major projects, representing major oil and gas clientele, both onshore in refineries, crude oil terminals and petrochemical plants, and offshore in platforms and construction barges in the North Sea, the Middle East and here in Malaysia. Currently he is the IMM Welding Committee Secretary.

Being a registered European Senior Welding Inspector, his extensive knowledge in various techniques and applications of welding processes and technology makes him familiar with the necessary requirements set by the industry for the role of Welding Inspection personnel, from both the contractor's and clientele's perspective. With his years of experience in the quality control and construction fields, he has covered many aspects for the requirements and performance demanded of a welding inspector.

DR. ABDUL AZIZ BIN MOHAMMED, Ph. D. Advanced Materials (Marine Technology)

Dr. Abdul Aziz is the principal Research Officer of Materials Technology Department in Industrial Technology Division of Malaysian Institute of Nuclear Technology Research (MINT). He has been working in the fields of Materials Characterisation both Destructive and Non-destructive Methods for more than 17 years. Besides his research work, Dr. Abdul Aziz has been consulted by contractors involved in the applications of materials in various sectors, namely, oil and gas, power generation, automobile, road and marine. His expertise was recognised by the International Atomic Energy Agency when he has been honoured for expert mission on organising and conducting NDT Level III (ISO) training courses for NDT personnel of Myanmar. Dr. Abdul Aziz is an active member in the Malaysian Non-Destructive Testing, National Vocational Training Council (NDT Training and Personnel Certification schemes) and the Institute of Materials, Malaysia.

PROGRAMME			
DAY 1 8.30 am Registration 9.00 am Opening Remarks 9.15 am Lecture 10.00 am Coffee Break 10.15 am Lecture 12.30 pm Lunch 1.30 pm Lecture 3.00 pm Coffee Break 3.15 pm Lecture 5.00 pm End of Day 1		DAY 2 9.00 am Lecture 10.00 am Coffee Break 10.15 am Lecture 12.30 pm Lunch 1.30 pm Lecture 3.00 pm Coffee Break 3.15 pm Lecture 5.00 pm End of Day 2	
DAY 3 9.00 am Lecture 10.00 am Coffee Break 10.15 am Lecture 12.30 pm Lunch 1.30 pm Lecture 3.00 pm Coffee Break 3.15 pm Lecture 5.00 pm End of Day 3		DAY 4 9.00 am Lecture 10.00 am Coffee Break 10.15 am Lecture 12.00 nn Lunch 12.45 pm Depart for UM 1.30 pm Laboratory Practical at UM 5.30 pm End of Day 4	
DAY 5 9.00 am Lecture 10.00 am Coffee Break 10.15 am Lecture 12.00 nn Lunch 3.00 pm Practical Examination 5.30 pm End of Day 5		DAY 6 8.30 am Written Examination Part 1 10.30 am Coffee Break 10.45 am Written Examination Part 2 1.00 pm End of Course	
IMM WELDING COMMITTEE			
Chairman	En. Zainuddin Ishak	Tel : 03-5519 8229 HP : 019-230 5555 E-mail: hce@bumiarmada.com.my	
Deputy Chairman	Dr. Teh Ser Kok	Tel : 03-7959 5265 HP : 019-6643212 E-mail: tsk@fk.um.edu.my	
Secretary	Mr. Garry Toft	Tel : 03-7378660 HP : 019-3870104 E-mail: phoenixl@tm.net.my	
 INSTITUTE OF MATERIALS, MALAYSIA Secretariat Address : Lot 1908, Batu 7, Jalan Bukit Kemuning 42450 Shah Alam Selangor Darul Ehsan Tel : 03-5218228 Contact Person : Puan Rohaya Rahim Fax : 03-5226352			

REGISTRATION IMM-WELDING INSPECTOR CERTIFICATION SCHEME

Fees (inclusive of examination)			Awards
*Early bird	Member	Non-member	IMM - Welding Inspector Certification
RM 3,500.00	RM 3,850.00	R3,950.00	

*To be eligible for early bird fee, **registration & payment** must reach the activity organiser **not less than 20 days** before course commences. Payments are to be made payable to the 'INSTITUTE OF MATERIALS, MALAYSIA' & to include 0.03% commission for every outstation cheque.

INTAKE

No.	Date	Location	No.	Date	Location
1	24-29 Sep 2001	PJ/KL	2	26-30 Nov 2001	Miri/Bintulu

Please register the following for the course:

Name of Candidate	Designation	Intake No.

WITHDRAWAL FROM COURSE

- If notice is given in writing more than 2 weeks **BEFORE COMMENCEMENT** of the course, a full refund will be made.
- If notice is given in writing **WITHIN** 2 weeks preceding the commencement of the course, a 75% refund will be made.
- If notice is given in writing **AFTER** the commencement of the course, no refund will be made.

Organisation Name:.....

Address:.....

Tel:.....Fax:.....

Contact Person:.....

Designation:..... Signature:.....

Important : Each candidate shall need to submit supporting evidence of educational qualification and welding related working experience with endorsement by employer.

Send registration and payment to the respective **ACTIVITY ORGANISERS:**

Activity Organiser (Sarawak)
INSTITUTE OF MATERIALS, MALAYSIA
c/o TELAGA MANAGEMENT SERVICES
Lot 600, 2nd Floor,
Block 7
Pelita Commercial Centre
98000 Miri, SARAWAK
Tel: 085-659564 Fax: 085-659564
Contact person: Theresa Lipah



Activity Organiser (Peninsular Malaysia)
INSTITUTE OF MATERIALS, MALAYSIA
c/o **GADING INSTITUTE SDN BHD(428531-K)**
85-2 & 87-2, Changkat Thamby Dollah
Off Jalan Pudu
55100 KUALA LUMPUR
Tel: 03-2141 6300 (4 lines) Fax: 03-2141 9053
Email: gading 99@tm.net.my
Contact persons: Chan Moi Leng/Cdr. Ir. Raymond

PRODUCT NEWS

FIBAROLL- A SEAMLESS SOLUTION TO CORROSION PREVENTION & INSULATION CLADDING

A new corrosion prevention concept, has recently been introduced into Malaysia and the surrounding region. It is the Fibaroll System from the UK.

Fibaroll is a range of technically advanced, fully composed, manufactured, glass reinforced plastic laminates. It is produced, uncured, in rolls, as a flexible solid, which is easily cut and moulded to any shape. It is cured by Ultra Violet light (sunlight) and forms a seamless and impenetrable waterproof lining, with excellent strength, abrasion resistance and impact properties. It is manufactured in manageable rolls 600mm x 10m in length and of a range of thickness, from 0.8mm to 2mm. It also has grades for chemical and fire retardancy.

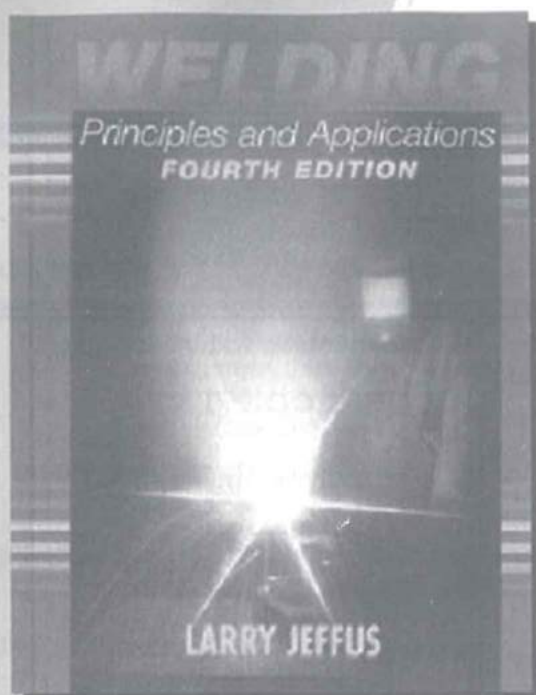
The Fibaroll material has a unique multi-layered system, providing superior, long term protection against the harshest attacks from weathering, chemicals and corrosion. Fibaroll solves a multiplicity of industrial maintenance problems and needs. In these strict, economically controlled operations, in the oil, gas, petrochemical, water treatment, construction and other major industries, the client needs to achieve optimum maintenance costs, to remain competitive. The Fibaroll system greatly reduces the maintenance costs, due to its "fit and forget" installation. Once cured, the material can withstand 200 bars of pressure and therefore offers a quick solution to leaking pipes and actually brings the integrity back into the pipe, preventing unscheduled shutdowns, due to its coldwork application.

The material can be applied to almost any surface. Skilled manpower is not required for the application of the system, it does not require specialized training, or expensive equipment for its installation. It is quickly and easily fitted, to the most awkward of shapes. It has already been utilized by several major oil, gas and petrochemical companies, for protection of underground piping, insulated piping/vessels cladding, repairs to pitted or corroded surfaces, storage tanks, shipping, concrete structures and tanks, jetties and various, other applications throughout industry.

It has long been a problem for the maintenance cost on piping, vessels, tanks, for replacing Stainless Steel insulation cladding, insulation materials and the relevant associated blasting and painting, due to damage and water ingress, due to the sealant disbondment. The Fibaroll system provides a high strength seamless solution to the common problems. It can actually be walked on, once it has cured! Due to its impressive durability and waterproof/weatherproof structure, excellent protection is obtained from all elements and water ingress and physical damage are no longer a concern, for insulated items. It is unaffected by UV degradation and actually uses the UV to cure.



There is a website available (www.fibaroll.com), which provides a number of case histories and technical data for the system. Contact for technical information can be made to 03-56211255 or 012-9081828 or email: phoenixt@tm.net.my



WELDING PRINCIPLES AND APPLICATIONS, 4E

by Larry Jeffus, Eastfield College,
Mesquite, Texas

This comprehensive welding text covers all aspects of welding, progressively guiding them from the absolute basics to AWS Certified Welder Test preparation. Experiments and practices are designed to familiarize the student with a wide range of machine settings, production of quality welds, while minimizing wasted stock and non-skilled work such as grinding and finishing. Based on standards established by the American Welding Society, the students learn to develop industry-acceptable practices for professional application.

- a new chapter in railroad welding has been added providing instruction and practices needed to further develop complex welding skills and demonstrating an important area of specialization
- the Welding Symbols Wheel provides welders with an at-a-glance guide to all symbols encountered on the job
- Study Guide/Lab Manual has been updated to correlate with all text updates
- follows the format of the American Welding Society (AWS) to familiarize and prepare the reader for testing and certification
- lab practices, with detailed instructions, are designed to develop specific welding skills applicable to industry standards
- outlined objectives, key terms, review questions, lab experiments and lab practices keep the reader focused on establishing acceptable practices

CONTENTS

Introduction: Introduction To Welding. Safety In Welding. Shielded Metal Arc Welding: Shielded Metal Arc Equipment, Setup & Operation. Shielded Metal Arc Welding Of Plate. Shielded Metal Cutting & Gouging. Gas Shielded Metal Cutting & Gouging. Gas Shielded Welding. Advanced Processes & Technology. Related Processes & Technology. Oxyfuel. Appendix. Glossary. Index.

ORDER FORM

Please return this completed order form to:

BOOK ONE SDN BHD c/o MIM Bookstore

Malaysian Institute of Management, 227, Jalan Ampang, 50450 Kuala Lumpur.

Tel: 03-2161 2085 H/P: 019-327 9329 Fax: 03-2161 2090 E-mail: bookone@po.jaring.my

Name: _____

☐ I enclosed a Closed Cheque/Money Order No. _____
(inclusive of postage) for RM _____
(made payable to 'Book One Sdn. Bhd.' only)

☐ Please charge the amount to my VISA/MASTERCARD/AMEX:



Name as on Credit Card: _____

Card Expiry Date: _____ Date of order: _____

Delivery Address: _____

Tel (Office): _____ (Home): _____

E-mail: _____

Signature: _____

(As per VISA/MASTERCARD/AMEX Card Account)

For enquiries into other book titles, please call
Alwi or Henry at Tel: 03-2161 2085

No.	Title	Qty	Retail (RM)	MIM members 10% Discount	Reg'd Post Per Book (RM)	Total (RM)
1.	Welding Principles and Applications, 4E		199.00	179.10	5.00	
						Total (RM)

* For Sabah & Sarawak postage charge is RM10.00 per book

The Institute of Materials, Malaysia

This 1-day course is a must for:

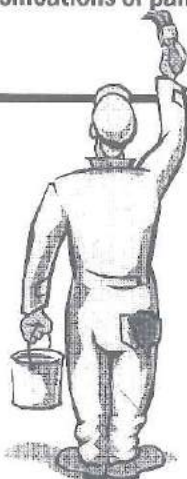
Engineers

Managers

Coatings Inspectors

Paint Applicators and...

All involved in maintenance, design and specifications of painting.



COATING DEFECTS *Failures, Rectification & Prevention*

Recognising coating failures, understanding their causes and how to rectify them can save costs in maintenance, prevent shut-downs and costly replacements.

Most coating failures can be avoided!

Competent inspection and supervision during construction is very important.

Maintenance programmes should be in place to deal with failures which appear after years of exposure to the severe prevailing weather conditions.

In this short but intensive course, coating defects and failures will be discussed. Methods of prevention

and rectification will be explained.

COURSE CONTENT

- Paint faults developing during storage.
- Coating defects arising during application.
- Coating defects developing during drying and curing.
- Coating defects apparent after application.
- Coating defects due to poor adhesion.
- Coating defects developing in service.
- Metallic coatings.

ACTIVITY ORGANISERS:



GADING INSTITUTE SDN BHD

Company no: 428531-K
85-2 & 87-2 Changkat Thamby Dollah
Off Jalan Pudu
55100 KUALA LUMPUR
Tel: 03-2141 6300 (4 lines)
Fax: 03-2141 9053
E-mail: gading99@tm.net.my

TELAGA MANAGEMENT SERVICES

Lot 600, 2nd Floor, Block 7
Pelita Commerce Centre
98000 Miri, SARAWAK
Tel: 085-659564
Fax: 085-659564

Intake	Location	Please tick (✓)
1 21 August 2001 (Tue)	Miri	
2 29 October 2001 (Mon)	Kuala Lumpur	

Time : 9.00 am—5.00 pm
Fee : RM 550.00 (early bird registration)
: RM 600.00 (IMM members) RM700.00 (Non-member)
Early fee : Payments received 20 and more days before course commencement.
Normal fee : Payments received less than 20 days before course commencement.
ALL CHEQUES ARE TO BE MADE IN FAVOUR OF THE "INSTITUTE OF MATERIALS, MALAYSIA". Add 0.03% for every outstation cheque.

REGISTRATION FORM

Name:
Company:
Address:
.....
Tel: E-mail:
..... Fax:
Contact Person: Designation :
Signature : Date:
Email:

Blasting & Painting Supervisor Course



There is an increasing demand for trained blasters and painters qualified to undertake the additional responsibilities of Supervisor in Blasting and Painting. This course is to upgrade these blasters and painters who wish to gain advanced skills in surface preparation and paint application to qualify for the Blasting and Painting Supervisor Certificate.

ACCREDITATION

Upon successfully completing the course, participants will be presented with a Certificate from the Institute of Materials, Malaysia and an Achievement Award from TAFE, Australia.

COURSE CONTENT

1. Corrosion
2. Corrosion Control By Protective Coatings
3. Surface Preparation
4. Application of Paints
5. Monitoring

Please (✓)	DATES	LOCATION
	23-24 Feb 2001	KL/PJ
	20-21 Apr 2001	P. Gudang/JB
	20-21 Jul 2001	KL/PJ
	27-28 Oct 2001	Kuantan

COURSE DETAILS

Duration : 2 days of classroom lectures
 Course Fee : RM1,250.00 (*early bird fee)
 : RM1,350.00 (usual fee)

*For payment received 20 or more days before commencement of course.

Name of Candidates	Designation	Intake

Name : _____

Address: _____

Tel: _____ Fax: _____

Contact Person: _____ Signature: _____

Send your registration to :

INSTITUTE OF MATERIALS, MALAYSIA

c/o Gading Institute
 85-2 & 87-2 Changkat Thamby Dollah
 Off Jalan Pudu
 55100 Kuala Lumpur
 Tel: 03 - 2141 6300 Fax: 03 - 2141 9053
 E-mail: gading99@tm.net.my



Please make cheques payable to "INSTITUTE OF MATERIALS, MALAYSIA".

CORROSION CONTROL BY PROTECTIVE PAINTS

Corrosion is the destruction of a metal by electro-chemical reaction with its environment.

COURSE CONTENT

Corrosion Fundamentals	3
Paints & Protective Coatings	3
Surface Preparation	3
Application of Paints	3
Coating Selection	3
Coating Failures, Repair and Maintenance	3

FOR WHOM

Managers	3
Engineers	3
Contractors	3
Site supervisors	3
Architects	3
Specifiers	3
Technical Paint Consultants	3

WHAT WILL PARTICIPANTS LEARN:

- What corrosion is.
- What protective coatings are and how these are used to give maximum protection in various climatic and environmental conditions.
- Economic evaluations of corrosion protection and the relative costs of protective systems for various substrates.
- Relative cost of surface preparation treatments and application methods of protective coatings.
- Coverage of coatings using roughness factors.

COURSE OUTCOMES

On completion of the course, participants will be able to accurately determine the extent of corrosion problems, what steps to take to prevent further deterioration, evaluate various protective coatings and choose the most cost effective coating systems to give optimum protection to the project.

COURSE DETAILS

Duration	: 2 days
Time	: 9.00 am—5.00 pm
Fee	: RM1,450.00 (usual fee)
	: RM1,350.00 (*early bird fee)

*For payments received 20 or more days before course commencement dates.

NO	DATES	LOCATION
1	19-20 Feb 01	KL/PJ
2	16-17 Apr 01	JB
3	16-17 Jul 01	KL/PJ
4	23-24 Oct 01	Kuantan

Name of Candidates	Designation	Intake

Name of Company: _____

Address: _____

Tel: _____

Fax: _____

Contact Person: _____

Signature: _____

Send your registration to :

INSTITUTE OF MATERIALS, MALAYSIA

c/o The Activity Organiser
Gading Institute
85-2 & 87-2 Changkat Thamby Dollah
Off Jalan Pudu
55100 Kuala Lumpur
Tel: 03 - 2416 300
Fax: 03 - 2419 053
E-mail: gading99@tm.net.my



Please make cheque payable
to the 'INSTITUTE OF
MATERIALS, MALAYSIA'.

PRELIMINARY CONFERENCE PROGRAMME

Pre-Conference 'Ice-Breaker' Programme (29th October, 2001)

"2001 IMM EXECUTIVE GOLF TOURNAMENT"

"2001 IMM EXECUTIVE BOWLING CHAMPIONSHIP"

DAY 1 - 30th October, 2001

Exhibition open from 8.00 a.m. - 6.00 p.m.

8.00am - 8.30am	Registration of Conference delegates
8.30am - 9.00am	Arrival of Minister, VIP & Guest of honour
9.00am - 9.10am	Welcoming Remarks by Conference Organizing Chairman, Dr. C L Lim
9.10am - 9.20am	Welcoming Remarks by IMM President, Dr. Rahim Md. Nor
9.20am - 9.30am	Speech an official opening by Minister of Science Technology & Environment, The Honourable Dato' Law Hieng Ding
9.30am - 10.00am	Morning Break (Networking, Press Conference & Exhibition visit by VIP)

PART I - TRENDS & ISSUES (Hosted by: IMM, Fabrication Committee)

Session Chairman: Ir. Mohd Suradi Yassin (c/o OGP Technical Services - PETRONAS subsidiary)

10.00am - 10.30am	GLOBAL OUTLOOK - KEYNOTE ADDRESS (BY IOM, UK)
10.30am - 1.00pm	Technical Sessions No: 1 - Global Experiences & Challenges
1.00pm - 2.00pm	Afternoon Break (Lunch) & Exhibition

PART II (Hosted by: IMM, Corrosion Committee)

Session Chairman: Mr. David Lim Chee Cheong (c/o ESSO Production Malaysia Inc)

2.00pm - 3.00pm	Technical Sessions/Workshop Series No: 2
3.00pm - 3.30pm	Afternoon Break (Coffee & Tea Refreshment) & Exhibition
3.30pm - 5.00pm	Technical Sessions/Workshop Series No. 3

DAY 2 - 31st October, 2001

Exhibition open from 8.30 a.m. - 6.00 p.m.

PART III (Hosted by: IMM, East Malaysia Committee)

Session Chairman: Puan Maimunah Ismail (c/o SHELL Sarawak Berhad)

9.00am - 10.30am	Technical Sessions/Workshop Series No: 4
10.30am - 11.00am	Morning Break & Exhibition - Special Presentation by Booth Participants
11.00am - 12.00pm	Technical Sessions/Workshop Series No. 5
12.00pm - 1.00pm	Lunch Break & Exhibition - Special Presentation by Booth Participants

PART IV (Hosted by: IMM, Polymer Committee)

Session Chairman: Dato' Dr. Ong Eng Long (c/o Malaysia Rubber Board)

1.00pm - 2.30pm	Technical Sessions/Workshop Series No: 6
2.30pm - 3.00pm	Afternoon Break (Coffee & Tea Refreshment) & Exhibition

PART V (Hosted by: IMM, Education & Career Committee)

Session Chairman: Dr. Teh Ser Kok (c/o Universiti Malaya)

3.00pm - 4.00pm	Technical Sessions/Workshop Series No: 7
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PART VI (Hosted by: IMM, Council)

Session Chairman: Dr. Rahim Md. Nor (c/o PETRONAS Research & Scientific Services)

4.00pm - 5.30pm	Technical Sessions/Workshop Series No: 8
5.30pm - 6.00pm	CLOSING CEREMONY - Presentation of Certificate of Attendance

"FABRICATION TECHNOLOGY"
(Incorporating CORROSION 2001)
CONFERENCE & EXHIBITION REGISTRATION FORM
Fax to 03.2272.5003

☐ I wish to take up exhibition booth space (3m x 3m, 3m x 2m SOLD OUT, 1m x 2mx1m LIMITED LEFT!)

☐ I wish to take up Banner Visibility pre, post during events.

☐ I wish to advertise in the souvenir programme, please send more information.

Conference Registration (For all registration before 31st August, 2001 each delegate will be given a LUCKY DRAW ticket for overseas & local travel, electrical items and more..)

* Conference Fee excluding Golf & Bowling Fee

☐ One Delegate: RM950 (USD250) – IMM Member /RM1330(USD350 – Non-Member

☐ Two Delegates: 15% ☐ Three Delegates: 20% Discount ☐ Four Delegates: 25% Discount

Name: Designation:

Name: Designation:

Name: Designation:

Organisation:

Tel No: Fax No:

Email: URL:

☐ I hereby enclosed my cheque/bank draft made payable to: "Institute of Materials, Malaysia"

☐ I am paying by bank transfer (copy attached) to:
INSTITUTE OF MATERIALS, MALAYSIA
 Hong Leong Berhad, 3, Jalan Takal 15/21, Section 15, 40000 Shah Alam, Selangor
Account no : 032-000-27316

☐ Payment by credit cards:

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AMERICAN EXPRESS CARD NO

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Card Expiry Date :

Card holder name: Signature:

Card holder's address :

Hotel Accommodation Booking

Mandarin Oriental Hotel

Deluxe Room (RM350.00/USD93 nett)

No. of rooms [] x [] nites

Nikko Hotel

Premier Room (RM282.50/USD75 nett)

No. of rooms [] x [] nites

Park Plaza International Hotel

Deluxe Room (RM195.00/USD52 nett)

No. of rooms [] x [] nites

Mutiara Hotel

Deluxe Room (RM250.00/USD66 nett)

No. of rooms [] x [] nites