

PERSONAL DATA SHEET



POSITION APPLIED FOR : ELECTRICAL AND INSTRUMENTATION
ENGINEER - KOREA

PERSONAL BACKGROUND :

NAME : JAIME S. LAPUZ
PROFESSIONAL ELECTRICAL ENGINEER
PRC No. 2902

EDUCATIONAL BACKGROUND :

1978 – 1983 BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING
ADAMSON UNIVERSITY COLLEGE OF ENGINEERING
SAN MARCELINO STREET, METRO MANILA, PHILIPPINES

1996 - 2000 MASTER OF SCIENCE IN ELECTRICAL ENGINEERING
TECHNOLOGICAL UNIVERSITY OF THE PHILIPPINES
SAN MARCELINO STREET, METRO MANILA, PHILIPPINES

SOME OF THE LOCAL AND INTERNATIONAL PROJECTS HANDLED :

PETTORABIGH (RABIGH, SAUDI ARABIA)
INDUS REFINERY (KARACHI, PAKISTAN)
AMAKPE REFINERY (NIGERIA)
CALTEX REFINERY (PHILIPPINES)
VOPAK TERMINALS (SINGAPORE)
SHELL CHEMICALS SERAYA (SINGAPORE)

WORK EXPERIENCE :

POSITION : SENIOR ELECTRICAL & INSTRUMENT ENGINEER
DURATION : NOVEMBER 2007 - JANUARY 2009
COMPANY : CHIYODA SINGAPORE (PTE) LIMITED
(OIL AND GAS / PETROCHEMICAL INDUSTRY)

**COMPANY ADDRESS : #14 INTERNATIONAL BUSINESS PARK,
JURONG EAST, SINGAPORE**

JOB DESCRIPTION :

PREPARE ELECTRICAL DETAILED ENGINEERING DESIGN FOR UPGRADING OF VARIOUS PLANT EQUIPMENT FOR SHELL IN CONFORMANCE WITH SHELL DEP STANDARD. DEVELOP ELECTRICAL DESIGN DELIVERABLES LIKE DRAWINGS / DOCUMENT LIST, EQUIPMENT SPECIFIC REQUIREMENTS, REQUISITION / DATA SHEETS FOR HV AND LV SWITCHGEAR, MCCs, ELECTRIC MOTORS AND VFDs, BID ANALYSIS, SINGLE LINE DIAGRAMS, G.A. AND SCHEDULE OF LV SWITCHGEAR, HV AND LV CONTROL CIRCUIT DIAGRAMS, CABLE ROUTING AND TRENCH LAYOUT, EQUIPMENT LAYOUT, LIGHTING LAYOUT, POWER AND GROUNDING LAYOUT, LIGHTNING PROTECTION LAYOUT AND CABLE LIST / SCHEDULE. PERFORM VARIOUS ELECTRICAL CALCULATIONS SUCH AS UTILITY DATA, CABLE SIZING AND VOLTAGE DROP CALCULATION, OCPD / CIRCUIT BREAKER SIZING, EARTHING AND LIGHTING CALCULATIONS. PERFORM POWER SYSTEM STUDIES LIKE SHORT CIRCUIT CALCULATIONS, LOAD FLOW STUDIES, MOTOR STARTING AND REACCELERATION STUDIES. CONDUCT SITE SURVEY AND ATTEND PROJECT AND OTHER RELEVANT MEETINGS. PREPARE TECHNICAL QUERIES TO THE CLIENT. REVIEW / CHECK DRAWINGS, DOCUMENTS AND EQUIPMENT DATA AND REQUISITION SHEET (EDRS)

PREPARE INSTRUMENTATION DELIVERABLES FOR SHELL AND VOPAK TERMINALS PROJECTS LIKE INSTRUMENT DOCUMENT LIST, INSTRUMENT INDEX, INSTRUMENT CABLE LAYOUT, INSTRUMENT CABLE SCHEDULE, INSTRUMENT LOOP DRAWINGS (ILD), INSTRUMENT HOOK-UP DRAWINGS, INSTRUMENT FIELD JUNCTION BOX TERMINATION DRAWINGS (ANALOG AND DIGITAL), DCS ARCHITECTURE, DCS SYSTEM I/O SCHEDULE CONFIG DATA AND DCS INTERLOCK LOGIC DIAGRAM. ASSIST IN THE PREPARATION AND UPDATING OF P&ID. PREPARE MATERIAL TAKE-OFF, SPECIFICATION AND DATA SHEETS (CONTROL VALVES, TANK GAUGING, DCS, INSTRUMENT CABLES, TRANSMITTERS AND GAUGES, ETC). PERFORM FACTORY ACCEPTANCE TEST FOR ALL CONTROL VALVES, E&U PANELS, MOV PANELS, DCS CABINETS, LOCAL CONTROL STATIONS, ETC., OVERSEE LOOP CHECKING OF ALL TRANSMITTERS AND CONTROL VALVES AS PER INSTRUMENT LOOP DRAWINGS.

POSITION : LEAD ELECTRICAL ENGINEER
DURATION : MAY 2005 - NOVEMBER 2007
**COMPANY : VENTECH INTERNATIONAL SERVICES (PHILIPPINES),
INCORPORATED
(OIL AND GAS / PETROCHEMICAL INDUSTRY)**
**COMPANY ADDRESS : 24TH FLOOR, INSULAR LIFE BUILDING
MUNTINLUPA CITY, PHILIPPINES**

JOB DESCRIPTION :

IN-CHARGE OF THE ON-GOING PROJECTS. PREPARE AND DEVELOP SCOPE OF WORK FOR ENGINEERING CONSULTANTS AND SUBCONTRACTORS. CONDUCT TECHNICAL REVIEWS OF ENGINEERING CONSULTANT'S WORK. CHECK AND PERFORM QUALITY AUDIT ON ALL DESIGN OUTPUTS IF THEY MEET DESIGN CRITERIA AND COMPLIANCE WITH THE COMPANY'S REQUIREMENTS, SPECIFICATIONS AND INTERNATIONAL STANDARDS (IEC, NFPA 70, IEEE, ANSI, API, BS AND NEMA) AND ENGINEERING NORMS. MAINTAIN COMPANY'S STANDARDS AND SPECIFICATIONS BY DEVELOPING NEW TECHNICAL SPECIFICATIONS AND UPDATING EXISTING ONES. IN-CHARGE FOR DATA ACQUISITION / DRAWINGS AND DOCUMENTS RETRIEVAL ACTIVITIES IN CALTEX CHEVRON. OVERSEE CALTEX CHEVRON ELECTRICAL RELATED SITE WALK-THROUGH AND DRAWING MARK-UP ACTIVITIES FOR DISMANTLING, EQUIPMENT REFURBISHING, REENGINEERING AND TRANSFER TO INDUS REFINERY PROJECT. COORDINATE WITH CALTEX CHEVRON'S OPERATIONS AND MAINTENANCE DEPARTMENT WHENEVER THERE IS ADDITIONAL WORK TO BE DONE INSIDE THE PLANT. PARTICIPATE IN CLARIFICATION MEETINGS WITH SUBCONTRACTORS AND CLIENT TO ENSURE COMPLIANCE WITH TECHNICAL SPECIFICATIONS AND REQUIREMENTS.

OVERSEE DETAILED ENGINEERING DESIGN ACTIVITIES FOR INDUS REFINERY AND AMAKPE REFINERY POWER DISTRIBUTION SYSTEMS, GROUNDING LAYOUT, ONE LINE DIAGRAM, CABLE TRENCH LAYOUT, CABLE TRAY LAYOUT FOR ALL ABOVEGROUND POWER AND CONTROL CABLES, LIGHTING LAYOUT, SUBSTATION EQUIPMENT LAYOUT, INTERCONNECTION SCHEMATIC DIAGRAMS, LOAD SCHEDULE, CABLE SCHEDULE, PANELBOARD SCHEDULE AND OTHER MISCELLANEOUS DETAILS AND CHECK CONFORMANCE TO DESIGN PHILOSOPHY, DIMENSIONS, ELEVATIONS, DESIGN CONDITIONS, PROJECT CRITERIA AND SPECIFICATIONS PRIOR TO CLIENT REVIEW. PERFORM ENGINEERING DESIGN CALCULATIONS SUCH AS CABLE SIZING, VOLTAGE DROP, CIRCUIT BREAKER SIZING, CABLE TRAY AND DUCT BANK SIZING, LIGHTING ILLUMINATION CALCULATION. LEAD IN TASK FORCES RELATED TO TECHNICAL AND ORGANIZATIONAL MATTERS. RESPONSIBLE FOR DETAILED MATERIAL TAKE-OFF AND ESTIMATE. RESPONSIBLE FOR MATERIAL MANAGEMENT PRIOR TO PURCHASING. PARTICIPATE IN TESTING AND INSPECTION ACTIVITIES AT SITE AND AT VENDOR / SUB-CONTRACTOR FACILITIES. COORDINATION WITH THE CLIENT, MANAGEMENT AND OTHER TECHNICAL GROUPS IN HOUSTON, TEXAS HEAD OFFICE AND OTHER ENGINEERING DISCIPLINE BASED IN PHILIPPINES.

PARTICIPATE IN CONCEPTUAL DESIGN FOR NEW PROJECTS AND LEAD ELECTRICAL ENGINEERING TEAM BASED IN PHILIPPINES.

POSITION : SENIOR ELECTRICAL AND INSTRUMENT ENGINEER
DURATION : AUGUST 2002 - MAY 2005
COMPANY : SHOWA ASTEC CO., LIMITED
COMPANY ADDRESS : YOKOHAMA OFFICE, HASHIBA NO.3 BUILDING,
2FL, 14-13, I-CHOME, SAIDO KONAN-KU
YOKOHAMA, JAPAN

JOB DESCRIPTION :

REVIEW DESIGN DRAWINGS AND OTHER TECHNICAL DOCUMENTS FOR PETRORABIGH (PC-1 & PC-2) AND OTHER SAUDI ARAMCO PROJECTS TO ENSURE COMPLIANCE WITH APPLICABLE CONTRACT REQUIREMENTS, SPECIFICATION, COMPANY AND INTERNATIONAL STANDARDS INCLUDING SAUDI ARAMCO ELECTRICAL STANDARDS. CARRY-OUT DETAILED ENGINEERING DESIGN FOR ABOVE AND UNDERGROUND POWER DISTRIBUTION. PREPARE HAZARDOUS AREA CLASSIFICATION LAYOUT, SUBSTATION EQUIPMENT ARRANGEMENT LAYOUT, ELECTRICAL CABLE ROUTE PLAN IN SUBSTATION AND OTHER AREAS, CABLE TRAY / RACK LAYOUT IN SUBSTATION AND PROCESS AREAS, CABLE ROUTE PLAN FOR TELECOMMUNICATION SYSTEM, POWER AND GROUNDING LAYOUT, LIGHTING LAYOUT IN ALL AREAS OF THE PLANT, STREET LIGHTING LAYOUT, DUCT BANK AND CABLE TRENCH LAYOUT, LAYOUT OF LIGHTNING RODS AND AIR TERMINATIONS, WIRING DIAGRAM OF IN-PLANT PAGING AND FIRE ALARM SYSTEM. PREPARE SCHEMATIC AND CONNECTION DIAGRAMS OF LV AND MV MOTORS TO MCC, INTERPOSING RELAY PANEL AND LOCAL CONTROL STATIONS. PERFORM POWER SYSTEM STUDIES LIKE SHORT CIRCUIT CALCULATION, LOAD FLOW STUDIES, HARMONIC ANALYSIS, DYNAMIC AND TRANSIENT STABILITY STUDIES, GROUND MAT STUDIES, SETTING SCHEDULE FOR PROTECTION RELAYS AND COORDINATION STUDIES. PREPARE SPECIFICATION FOR POWER TRANSFORMERS (OIL-IMMERSED), HIGH AND LOW VOLTAGE SWITCHGEAR, MOTOR CONTROL CENTER, GENERATOR, UPS, BATTERIES, VARIABLE SPEED DRIVE, MOTOR STARTERS, HV AND LV CABLES, FIRE ALARM SYSTEM, PAGING AND SECURITY SYSTEMS. DEVELOP ONE LINE DIAGRAM FOR ELECTRICAL POWER DISTRIBUTION SYSTEM, PROTECTION AND METERING SINGLE LINE DIAGRAM, UPS AND DC CHARGER SYSTEM SINGLE LINE DIAGRAM.

PREPARE INSTRUMENTATION DELIVERABLES FOR PETRORABIGH AND OTHER SAUDI ARAMCO PROJECTS LIKE INSTRUMENT DOCUMENT LIST, INSTRUMENT INDEX, INSTRUMENT CABLE LAYOUT, INSTRUMENT CABLE SCHEDULE, INSTRUMENT LOOP DRAWINGS (ILD), INSTRUMENT HOOK-UP DRAWINGS, INSTRUMENT FIELD JUNCTION BOX TERMINATION DRAWINGS (ANALOG AND DIGITAL), DCS ARCHITECTURE, DCS SYSTEM I/O SCHEDULE CONFIG DATA AND DCS INTERLOCK LOGIC DIAGRAM. ASSIST IN THE PREPARATION AND UPDATING OF P&ID. PREPARE MATERIAL TAKE-OFF, SPECIFICATION AND DATA SHEETS (CONTROL VALVES, TANK GAUGING, DCS, INSTRUMENT CABLES, TRANSMITTERS AND GAUGES, ETC). PERFORM FACTORY ACCEPTANCE TEST FOR ALL CONTROL VALVES, E&U PANELS, MOV PANELS, DCS CABINETS, LOCAL CONTROL STATIONS, ETC., OVERSEE LOOP CHECKING OF ALL TRANSMITTERS AND CONTROL VALVES AS PER INSTRUMENT LOOP DRAWING

POSITION : ELECTRICAL AND INSTRUMENT ENGINEER
DURATION : MAY 2000 - AUGUST 2002
COMPANY : ATS (SHOWA ASTEC PHILIPPINES)
**COMPANY ADDRESS : JGC BUILDING, MADRIGAL BUSINESS PARK,
ALABANG, MUNTINLUPA CITY, PHILIPPINES**

JOB DESCRIPTION :

PREPARE CONSTRUCTION SCOPE OF WORK POINT-BY-POINT, COMPREHENSIVE AND COMPLETE INSTRUCTION FOR THE CONSTRUCTION ACTIVITIES. CONDUCT SITE SURVEY TO EVALUATE THE SITE CONDITIONS AND VERIFY THE JOB REQUIREMENTS IN THE SITE AS PER THE SCOPE OF WORK OF THE PROJECT. PREPARE WORK SCHEDULE AND PROGRESS REPORT. WITNESS FACTORY ACCEPTANCE TEST FOR ELECTRICAL AND INSTRUMENTATION EQUIPMENT. PROVIDE TECHNICAL SUPPORT TO MULTI-DISCIPLINE ENGINEERING TEAM IN CONCEPTUAL STUDIES, CONCEPTUAL / BASIC DESIGN AND DETAILED ENGINEERING. PREPARE MATERIAL TAKE-OFF AND ESTIMATE BASED ON THE DETAILED ENGINEERING DESIGN.

CARRY-OUT THE DETAILED ENGINEERING DESIGN FOR POWER DISTRIBUTION SYSTEMS, GROUNDING LAYOUT, ONE LINE DIAGRAM, LOAD SCHEDULE, CABLE SCHEDULE, INTERCONNECTION DIAGRAM, LIGHTING ILLUMINATION AND MISCELLANEOUS DETAILS. CARRY-OUT THE ELECTRICAL ENGINEERING DESIGN CALCULATIONS SUCH AS SHORT CIRCUIT CALCULATIONS AND ANALYSIS, CIRCUIT BREAKER SIZING, FEEDER SIZING, VOLTAGE DROP, TRANSFORMER SIZING, CONDUIT FILL, CABLE TRAY SIZING, LIGHTING ILLUMINATION AND GROUNDING.

PREPARE I/O LIST FOR CONTROL SYSTEMS AND INSTRUMENTS, CAUSE & EFFECT DIAGRAM, INSTRUMENTATION MATERIAL TAKE-OFF, DETAILED INSTRUMENT INSTALLATION DRAWINGS. PREPARE INSTRUMENTS AND CONTROL SPECIFICATION FOR ALL PROJECTS HANDLED. PERFORM INSTRUMENT PRECOMMISSIONING AND COMMISSIONING ACTIVITIES (CHECK CORRECT PROCESS INSTRUMENT INSTALLATION AND WIRING TERMINATION, CHECK CORRECT ASSIGNMENT OF ALL I/O MODULE TERMINAL ADDRESS, CONDUCT ACTUAL SIMULATION TEST FOR ALL I/O's (BOTH DIGITAL AND ANALOG) IN THE FIELD AND MONITORING THEIR STATUS FROM WORKSTATION LOCATED IN CCR.

PREPARE DOCUMENT LIST, INSTRUMENT INDEX, INSTRUMENT CABLE LAYOUT, INSTRUMENT CABLE SCHEDULE, INSTRUMENT LOOP DRAWINGS (ILD), INSTRUMENT HOOK-UP DRAWINGS, INSTRUMENT FIELD JUNCTION BOX TERMINATION DRAWINGS (ANALOG AND DIGITAL), DCS ARCHITECTURE, DCS SYSTEM I/O SCHEDULE CONFIG DATA AND DCS INTERLOCK LOGIC DIAGRAM. ASSIST IN THE PREPARATION AND UPDATING OF P&ID. PREPARE MATERIAL TAKE-OFF, SPECIFICATION AND DATA SHEETS (CONTROL VALVES, TANK GAUGING, DCS, INSTRUMENT CABLES, TRANSMITTERS AND GAUGES, ETC).

POSITION : SECTION CHIEF, ELECTRICAL DEPARTMENT
DURATION : DECEMBER 1993 - MAY 2000
COMPANY : FUJI ELECTRIC PHILIPPINES
(OPERATION AND MAINTENANCE)
COMPANY ADDRESS : CARMELRAY INDUSTRIAL ESTATE,
CANLUBANG, LAGUNA, PHILIPPINES

POSITION : SENIOR ELECTRICAL ENGINEER
DURATION : APRIL 1990 - NOVEMBER 1993
COMPANY : ELECTRONIC DEVICES LIMITED
(OPERATION AND MAINTENANCE)
COMPANY ADDRESS : GENERAL GARMENTS BUILDING,
KWAI CHEONG ROAD, KWAI CHUNG
NEW TERRITORIES, HONG KONG

POSITION : ELECTRICAL ENGINEER
DURATION : APRIL 1983 - MARCH 1990
COMPANY : INTEGRATED MICROELECTRONICS INCORPORATED
(OPERATION AND MAINTENANCE)
COMPANY ADDRESS : SOUTH SUPERHIGHWAY, MUNTINLUPA CITY
PHILIPPINES

HONORS / SCHOLARSHIPS / APPRECIATIONS :

**SCHOLARSHIP TO MANPOWER AND YOUTH COUNCIL UNDER THE
COURSE “INDUSTRIAL SEQUENCE CONTROL “**

**SCHOLARSHIP TO CONSTRUCTION AND MANPOWER DEVELOPMENT
FOUNDATION UNDER THE COURSE “INDUSTRIAL ELECTRICITY “**

**PLAQUE OF APPRECIATION FOR SHARING PROFESSIONAL EXPERTISE AS
RESOURCE SPEAKER ON THE TOPIC “PROGRAMMABLE LOGIC
CONTROLLER” DURING THE IIEE 28th ANNUAL NATIONAL CONVENTION**

PUBLICATION :

**TECHNICAL ARTICLE ENTITLED “ELECTRONIC PROTECTION FOR THREE-PHASE
MOTORS”, PUBLISHED IN THE ELECTRICAL ENGINEER MAGAZINE.**

PART-TIME EMPLOYMENT IN PHILIPPINES :

DESIGNATION	NAME OF COMPANY AND ADDRESS
LECTURER	ASIAN POWER SYSTEMS REVIEW AND TRAINING CENTER 881 CARMEN BUILDING, ESPANA ST., SAMPALOC, MANILA PHILIPPINES
LECTURER	MANILA ELECTRIC COMPANY LINEMAN TRAINING CAMP MERALCO COMPOUND, ORTIGAS ST., MANDALUYONG CITY PHILIPPINES
LECTURER	INSTITUTE OF INTEGRATED ELECTRICAL ENGINEERS FOUNDATION #41 MONTE DE PIEDAD ST., CUBAO, QUEZON CITY PHILIPPINES
PROFESSOR, ELECTRICAL ENGINEERING DEPARTMENT	NATIONAL UNIVERSITY SAMPALOC, MANILA PHILIPPINES
PROFESSOR, ELECTRICAL ENGINEERING DEPARTMENT	TECHNOLOGICAL UNIVERSITY OF THE PHILIPPINES TAGUIG CITY, PHILIPPINES
PROFESSOR, ELECTRICAL ENGINEERING DEPARTMENT	FEATI UNIVERSITY STA. CRUZ, MANILA PHILIPPINES

COMPUTER LITERACY :

IN-DEPTH KNOWLEDGE OF THE FOLLOWING SOFTWARES :

- 1. HEWLETT – PACKARD 98752A AUTO-CAD**
- 2. AUTOCAD VERSION R13, R14 AND 2000**
- 3. UNIX OPERATING SYSTEM**
- 4. C- LANGUAGE**
- 5. WINDOWS 2000 AND XP (MS POWERPOINT / MS WORD / MS EXCEL)**
- 6. AUTOCAD LT 2006, 2007**
- 7. MICROSOFT OFFICE V8 2004**
- 8. ETAP**

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS :

ACTIVE MEMBER : INSTITUTE OF INTEGRATED ELECTRICAL ENGINEERS
ACTIVE MEMBER : PHILIPPINE INSTRUMENTATION AND CONTROL SOCIETY
FORMER : INSTITUTE OF INTEGRATED ELECTRICAL ENGINEERS
DIRECTOR FOUNDATION

GOVERNMENT EXAMINATIONS TAKEN :

TITLE	DATE TAKEN	REMARKS
ASSISTANT ELECTRICAL ENGINEER LICENSURE EXAMINATION	APRIL 9 – 10, 1984	PASSED
ASSOCIATE ELECTRICAL ENGINEER LICENSURE EXAMINATION	APRIL 9 – 10, 1988	PASSED
PROFESSIONAL ELECTRICAL ENGINEER LICENSURE	APRIL 9 – 10, 1994	PASSED

RESOURCE SPEAKER IN THE FOLLOWING IIEE SHORT TERM COURSES :

- 1. MOTORS AND ADVANCED MOTOR PROTECTION**
- 2. ADJUSTABLE SPEED DRIVES AND PROGRAMMABLE LOGIC CONTROLLERS**
- 3. CIRCUIT BREAKER TECHNOLOGY AND SHORT CIRCUIT PROTECTION**
- 4. CONTACTOR SELECTION, MOTOR STARTING METHODS AND SOFT STARTERS**

TRAININGS, SEMINARS, CONVENTIONS ATTENDED :

TITLE	DATE ATTENDED	VENUE
DESIGN OF POWER SYSTEM IN COMMERCIAL AND INDUSTRIAL PLANTS	SEPTEMBER 5 – 17, 1986	INSTITUTE OF INTEGRATED ELECTRICAL ENGINEERS
WIND AND HYDROELECTRIC POWER PLANTS	SEPTEMBER 18 - OCTOBER 5, 1987	NATIONAL ENGINEERING CENTER
INDUSTRIAL SEQUENCE CONTROL	APRIL 1988 - MAY 6, 1988	NATIONAL MANPOWER & YOUTH COUNCIL
IEEE 13th ANNUAL NATIONAL CONVENTION	NOVEMBER 18–20, 1988	WESTIN PHILIPPINE PLAZA
MERALCO POWER ENGINEERING PROGRAM FOR ELECTRICAL ENGINEERS	DECEMBER 1988 - SEPTEMBER 1989	MANILA ELECTRIC COMPANY
INDUSTRIAL ELECTRICITY	APRIL 17 - MAY 25, 1989	CONSTRUCTION MANPOWER DEVELOPMENT CENTER
PROTECTIVE RELAYING	FEBRUARY 18 – 29, 1990	INSTITUTE OF INTEGRATED ELECTRICAL ENGINEERS
5 MONTHS TRAINING IN JAPAN ON SEMICONDUCTOR EQUIPMENT	DECEMBER 1994 - APRIL 1995	DISCO AUTOMATION / NEC / NICHIDEN / USHIO FUJI ELECTRIC
MOTOR MANAGEMENT COURSE	JULY 7 – 11, 1995	ROCKWELL AUTOMATION
ELECTRO-PNEUMATICS AND PLC APPLICATIONS	AUGUST 23 – 28, 1995	SMC PNEUMATICS
OIL / PETROCHEMICAL SAFETY SEMINAR	DECEMBER 2006	ASSOCIATION OF PROCESS INDUSTRY (SINGAPORE)