

intMPE QUALITY ASSURANCE MANUAL

ISSUE # _____ DATE _____

ISSUED TO COMPANY _____

LOCATION OF COMPANY _____

EMPLOYEE TITLE _____

DEPARTMENT _____



intMPE QUALITY ASSURANCE MANUAL

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intMPE QUALITY ASSURANCE MANUAL

1.1 STATEMENT OF POLICY AND AUTHORITY

IT IS THE POLICY OF **intMPE, Inc.** AND ITS MANUFACTURING PARTNERS. TO SUPPLY MECHANICAL PRODUCTS WHICH EXCEED THE QUALITY REQUIREMENTS OF ANSI API-610 SPECIFICATIONS FOR USE IN THE INDUSTRIAL INDUSTRIES OF OUR WORLD. **intMPE, Inc.** IS DEDICATED AND BOASTS A REPUTATION OF LESS THAN .0001% RETURN RATE ON PRODUCTS SUPPLIED TO OUR CUSTOMERS AND END-USERS. EACH MEMBER OF **intMPE, Inc.** WORKS CLOSE WITH PRODUCTION PERSONNEL AND OUR SEVERAL PRODUCING PARTNERS TO PRODUCE ON-TIME QUALITY GOODS.

AS PRESIDENT OF **intMPE, Inc.**, I WHOLLY SUPPORT OUR CORPORATE OBJECTIVE AND COMMITMENT TO SUPPLY AND/OR MANUFACTURE PRODUCTS OF THE HIGHEST QUALITY NECESSARY TO ENSURE COMPLIANCE WITH ALL INDUSTRY STANDARDS AND CUSTOMER/END-USER SPECIFICATIONS. OUR QUALITY ASSURANCE PROGRAM AS OUTLINED IN THIS MANUAL IS ENFORCED BY OUR MANUFACTURING PARTNERS AND WILL BE ADHERED TO, MAINTAINING THE **intMPE, Inc.** COMMITMENT TO QUALITY THROUGH-OUT OUR DOMESTIC AND FOREIGN OPERATIONS.

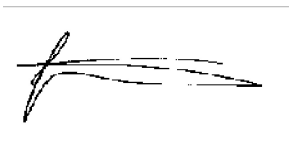
EACH PERSON AND/OR DEPARTMENT IDENTIFIED IN THIS MANUAL SHALL BE RESPONSIBLE FOR IMPLEMENTING THE REQUIREMENTS OF THIS MANUAL.

THE QUALITY ASSURANCE MANAGER OF **intMPE, Inc.**, IS DELEGATED THE AUTHORITY TO ESTABLISH AND DIRECT PLANT QUALITY CONTROL PROGRAMS AND IS CHARGED WITH THE RESPONSIBILITY TO ENSURE COMPLIANCE WITH THIS MANUAL. ACCESS TO TOP MANAGEMENT ON MATTERS CONCERNING QUALITY ARE DIRECTED TO THE PRESIDENT.

THIS AUTHORITY AND ASSIGNMENT ALSO GIVES OUR SHIPPING DEPARTMENT FINAL RESPONSIBILITY TO HALT THE SHIPMENT OF ANY PRODUCT TO OUR CUSTOMER/END-USER THAT IS IN VIOLATION OF QUALITY STANDARDS DELINEATED IN THIS MANUAL UNTIL CORRECTIVE ACTION HAS OCCURRED.

NO CHANGES IN THE PROCEDURES DELINEATED IN THIS MANUAL MAY BE MADE WITHOUT SPECIFIC WRITTEN APPROVAL BY THE PRESIDENT.

THANK YOU FOR YOUR CONFIDENCE IN OUR PRODUCTS AND SERVICES.



John M. Strome Adm.D.
President, **intMPE, Inc.**

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1.2 ORGANIZATION

1.2.1 **intMPE, Inc.** IS ORGANIZED WITH MANUFACTURING PARTNERS IN CHINA AND IN THE AMERICAS WHO ARE APPROVED VENDOR/AFFILIATES, ORGANIZED AS FOLLOWS FOR THE MANUFACTURING AND SUPPLY OF SLURRY PUMPS, CHEMICAL PUMPS, WATER PUMPS, AND REPLACEMENT AFTER MARKET PUMP PARTS THAT ARE USED IN INDUSTRIAL SLURRY, ANSI B73.1M AND OR API-610 MECHANICAL EQUIPMENT APPLICATIONS.

1.2.2 CEO, PRESIDENT DIRECTORS

1.2.3 GENERAL MANAGERS

1.2.4 PERSONNEL

1.2.5 COMPTROLLERS

1.2.6 ACCOUNTING

1.2.7 PURCHASING, VENDOR/AFFILIATES

1.2.8 DATA PROCESSING

1.2.9 QUALITY ASSURANCE MANAGER, VENDOR/AFFILIATES

1.2.10 INSPECTION GROUP, VENDOR/AFFILIATES

1.2.11 MARKETING MANAGER

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1.2.14 QUOTATIONS

1.2.15 SALES REPRESENTATIVES AND DISTRIBUTORS

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1.2.17 ENGINEERING DRAFTING

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1.2.20 FOUNDRIES, MANUFACTURING AND VENDOR/AFFILIATES

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1.2.21 MACHINE SHOPS, MANUFACTURING AND VENDOR/AFFILIATES

1.2.22 MAINTENANCE

1.2.23 SHIPPING/RECEIVING DEPARTMENTS

1.3 CONTROL OF QUALITY ASSURANCE MANUAL

1.3.1 THE **intMPE, Inc.**, OPERATIONS MANAGER IS RESPONSIBLE FOR THE ISSUANCE OF CONTROLLED COPIES OF THIS QUALITY ASSURANCE MANUAL. ALL SUBSEQUENT REVISIONS TO THE MANUAL MUST BE APPROVED BY THE PRESIDENT. RECORDS OF ISSUANCE OF THE MANUAL SHALL BE MAINTAINED BY THE QUALITY ASSURANCE DEPARTMENT.

1.3.2 THE QUALITY ASSURANCE MANAGER SHALL REVIEW AND SEND FOR APPROVAL TO THE PRESIDENT ALL REVISIONS TO THIS QUALITY ASSURANCE MANUAL. COMPLIANCE MUST BE MAINTAINED WILL ALL ANSI AND/OR API-610 APPLICABLE STANDARDS.

1.3.3 PROPOSED REVISIONS TO THE MANUAL MUST BE SUBMITTED IN WRITING TO THE QUALITY ASSURANCE MANAGER.

1.3.4 THE QUALITY ASSURANCE MANAGER SHALL BE RESPONSIBLE FOR INCORPORATING REVISIONS INTO ANY UNDISTRIBUTED MANUALS.

1.3.5 FORMS INCLUDED IN SECTION 16 (APPENDIX) OF THIS MANUAL ARE TYPICALLY USED BY **intMPE, Inc.**, AND THEIR PRODUCING AFFILIATES. MINOR CHANGES, WHICH DO NOT AFFECT METHODS OR SYSTEMS IDENTIFIED ELSEWHERE IN THE MANUAL, WILL NOT CONSTITUTE A NEED FOR MANUAL REVISION.

1.4 TRAINING PROGRAM

1.4.1 IT SHALL BE THE RESPONSIBILITY OF THE QUALITY ASSURANCE MANAGER TO DEVELOP AND IMPLEMENT TRAINING PROGRAMS FOR PERSONNEL WHOSE ACTIVITIES AFFECT QUALITY. ALL PERSONNEL TRAINING SHALL BE RECORDED ON (EXHIBIT 16) THE TRAINING PROGRAM LOG.

1.4.2 TRAINING OF NEW PERSONNEL ON THE **intMPE, Inc.** QUALITY ASSURANCE MANUAL SHALL BE THE RESPONSIBILITY OF EACH DEPARTMENT HEAD TO SUPPORT OPERATING PROCEDURES AND DEPARTMENTAL STANDARDS.

1.4.3 TRAINING SHALL OCCUR AT PERIODIC INTERVALS TO ASSURE PERSONNEL RETAIN THE KNOWLEDGE OF THE QUALITY SYSTEM NECESSARY TO PERFORM THEIR DUTIES EFFECTIVELY. SUCH TRAINING SHOULD OCCUR, BUT NOT BE LIMITED TO INSTANCES, WHEN CHANGES ARE MADE TO THE QUALITY ASSURANCE MANUAL OR ITS SUPPORTING

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DOCUMENTS.

1.4.4 TRAINING SESSION(S) SHALL BE DOCUMENTED BY DEPARTMENT MANAGERS, OR DESIGNATE. RECORDS SHALL INCLUDE THE DATE(S) OF THE SESSION(S), PERSONNEL ATTENDING, AND DESCRIPTIONS OF THE TOPICS COVERED. SUFFICIENT DETAIL TO ADEQUATELY DESCRIBE THE MATERIAL REVIEWED DURING THE SESSION(S) SHALL BE MAINTAINED BY THE QUALITY ASSURANCE MANAGER. (SECTION 16)

2.0 DESIGN CONTROL

2.1 QUOTATION - ORDER ENTRY

2.1.1 INQUIRY INFORMATION WILL BE CHECKED AGAINST ANSI/API-610 CODES AND CUSTOMER SPECIFICATIONS WILL BE VERIFIED. THE SALES DEPARTMENT SHALL CHECK DRAWING FILES AND INVENTORY ENSURING PARTS ARE AVAILABLE. ALL DATA PERTAINING TO EACH INQUIRY ITEM WILL BE POSTED ON THE WORK SHEET. PRICES WILL BE CHECKED TO ENSURE THAT ACCURATE PRICING OF EACH INQUIRY ITEM IS POSTED ON THE (EXHIBIT A) WORK SHEET.

2.1.2 A COPY OF TYPED QUOTATIONS SHALL BE MADE AND FILED IN ALPHABETIC SEQUENTIAL ORDER FOR FUTURE REFERENCE.

2.1.3 SAMPLES ARE RECEIVED IN **intMPE, Inc.**, SHIPPING/RECEIVING. THEY ARE ASSIGNED A SAMPLE NUMBER WHICH IS PRINTED ON THE PART THE RECEIVING PAPERWORK. A WRITTEN LOG IS GIVEN TO SALES DEPARTMENT TO ADVISE IF DRAWINGS ARE REQUIRED.

2.1.4 **intMPE, Inc.**, SALES PRODUCTION COORDINATORS WORK TOGETHER TO COST EACH ITEM.

2.1.5 A COPY OF ALL QUOTATIONS IS FILED IN ALPHABETIC SEQUENTIAL ORDER FOR FUTURE REFERENCE.

2.1.6 ORDERS RECEIVED AT **intMPE, Inc.**, BY MAIL/FAX ARE STAMPED WITH THE DATE RECEIVED AND FORWARDED TO THE ORDER ENTRY DEPARTMENT TO BE LOGGED IN THE CROSS REFERENCE BOOK.

2.1.7 PROCESSING BEGINS BY MAKING A COPY OF THE PURCHASE ORDER AND STAMPING THE WORDS "WORK SHEET" ON IT. ADDED TO THE WORK SHEET WILL BE INFORMATION REQUIRED TO MEET CUSTOMER/END-USER AND/OR ANSI/API-610 SPECIFICATIONS.

2.1.8 CUSTOMER/END-USER REQUIREMENTS ARE VERIFIED TO ENSURE ALL APPLICABLE PRODUCTION CODES ARE MET. ANY ADDITIONAL INFORMATION SHALL BE POSTED ON THE WORK SHEET.

2.1.9 A **intMPE, Inc.**, JOB NUMBER IS ASSIGNED. ALL PERTINENT INFORMATION IS

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RECORDED ON THE JOB FOLDER FORM (EXHIBIT 01) . JOB NUMBER IS RECORDED IN THE CROSS REFERENCE BOOK.

2.1.10 A COPY OF THE APPLICABLE INVENTORY SHEET (EXHIBIT 02) SHALL BE INCLUDED WITH THE JOB FOLDER FORM.

2.1.11 THE JOB FOLDER IS INSPECTED BY THE ORDER PROCESSOR.

2.1.12 THE PROCESSOR SHALL REVIEW THE JOB FOLDER TO DETERMINE THE FOLLOWING:

A. ADEQUACY OF INFORMATION PROVIDED.

B. ACCURACY OF SELLING/COST PRICING.

C. I INVENTORY IS AVAILABLE.

D. IF DRAWINGS ARE AVAILABLE FOR MANUFACTURE.

E. MAXIMUM ALLOWABLE COST IF MANUFACTURE IS REQUIRED.

F. DELIVERY SCHEDULE.

G. PRODUCTION AND INVENTORY LEVELS.

2.1.13 ORDER IS RETURNED TO THE ORDER ENTRY DEPARTMENT.

2.1.14 THE **intMPE, Inc.**, ORDER ENTRY DEPARTMENT SHALL RECORD ALL DECISIONS MADE BY THE SALES SUPERVISOR AND/OR SALES AND MARKETING MANAGER ON THE NOB FOLDER FORM AND INVENTORY SHEET.

2.1.15 THE JOB FOLDER PACKET SHALL BE FORWARDED TO THE PRODUCTION CONTROL DEPARTMENT.

2.1.16 UPON RELEASE OF THE JOB BY THE PRODUCTION CONTROL DEPARTMENT, THE JOB FOLDER PACKET WILL BE RETURNED TO THE ORDER PROCESSING DEPARTMENT FOR ACKNOWLEDGMENT.

2.1.17 JOBS FAILING TO MEET **intMPE, Inc.**, INITIAL PRODUCTION CONTROL WILL BE GIVEN TO THE SALES DEPARTMENT TO NOTIFY THE CUSTOMER/END-USER FOR POSSIBLE RE-ACKNOWLEDGMENT.

2.1.18 ROUTE SHEET (EXHIBIT 03) SHALL BE CALLED "PRODUCTION ORDER" AND SHALL HAVE APPLICABLE ENGINEERING DRAWINGS AND ANY OTHER DOCUMENTS REQUIRED FOR THE MANUFACTURING OF ITEM(S).

2.1.19 PRODUCERS ARE RESPONSIBLE FOR PREPARATION OF ROUTE SHEETS WHICH

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SPECIFY ALL MANUFACTURING AND QUALITY ASSURANCE OPERATIONS. REQUIRED NOTIFICATION AND/OR HOLD POINTS REQUESTED BY THE CUSTOMER/END-USER SHALL BE INCLUDED.

2.1.20 THE **intMPE, Inc.**, PRODUCTION CONTROL DEPARTMENT SHALL FORWARD ALL NON APPROVED DRAWINGS TO ENGINEERING FOR REVIEW AND APPROVAL.

2.1.21 THE ORDER SHALL BE FORWARDED TO THE PRODUCING PLANT AFTER DRAWING APPROVAL BY ENGINEERING.

2.1.22 THE PRODUCING PLANT SHALL REVIEW ALL DOCUMENTS FOR ACCURACY. TRACEABILITY AND/OR TESTING REQUIREMENTS SHALL BE ADDED TO THE ORDER TO ASSURE ANSI AND/OR API-610 QUALITY.

2.1.23 IT SHALL BE THE RESPONSIBILITY OF THE PRODUCER TO DEVELOP APPROVED MANUFACTURING PROCEDURES.

2.1.24 ORDERS COMPLETE WITH APPROVED DRAWINGS AND ALL SPECIAL REQUIREMENTS ARE THEN RELEASED TO THE PRODUCER.

2.1.25 UPON RELEASE FOR PRODUCTION, THE **intMPE, Inc.**, SALES DEPARTMENT SHALL SEND AN ACKNOWLEDGMENT TO THE CUSTOMER/END-USER.

2.2 DESIGN CONTROL AND REVIEW.

2.2.1 THE DESIGN OF MANUFACTURED PRODUCTS IS CONTROLLED BY THE **intMPE, Inc.** PRODUCT ENGINEERING DEPARTMENT AND IS THE SPECIFIC RESPONSIBILITY OF THE PRODUCT ENGINEER TO ENSURE THAT ALL DRAWINGS ARE TO ANSI AND/OR API-610 STANDARDS TO ENSURE PRODUCT SAFETY AND PERFORMANCE.

2.2.2 THE DESIGN REQUIREMENTS OF OUR CUSTOMERS/END-USERS SHALL BE TRANSLATED INTO PRODUCTION DRAWINGS BY **intMPE, Inc.**, ENGINEERS.

2.2.3 THE PRODUCTS DESIGN AND DRAWINGS SHALL BE APPROVED BY THE PRODUCT ENGINEER OR DESIGNATE.

2.2.4 ALL FIELD REVERSED ENGINEERED DRAWINGS TAKEN FROM ORIGINAL EQUIPMENT MANUFACTURERS (OEM) PARTS SHALL SHOW HOW MEASUREMENTS WERE OBTAINED. METHOD MUST BE VERIFIED BY THE PRODUCT ENGINEERING SUPERVISOR BEFORE RE-RECORDING ON CADD (VERSION 12) FOR PRODUCTION APPROVAL.

2.2.5 CHECKS WILL BE MADE FOR MECHANICAL CONFORMITY OF THE RADIUS'S AND WALL THICKNESS FOR CASTINGS ON ALL CURVED SURFACES AND IMPELLER VANES.

2.2.6 DE-CODING OF THE OEM PART NUMBER THAT CONTAINS MATERIAL SPECS WILL BE

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THE RESPONSIBILITY OF THE PRODUCT ENGINEERING SUPERVISOR. THIS MUST BE COORDINATED WITH THE CUSTOMER/END-USER TO ENSURE UP-TO-DATE INFO IS SUPPLIED ON THEIR ORDER.

2.2.7 ASTM MATERIAL SPECS AND HARDNESS REQUIREMENTS WITH PROPER MACHINING MARKS FOR GROUND AND POLISHED SURFACES SHALL BE SHOWN ON ALL **intMPE, Inc.**, DRAWINGS AND MUST MEET WITH ANSI AND/OR API-610 STANDARDS.

2.2.8 NO DRAWINGS SHALL BE MADE FROM PARTS OTHER THAN OEM SAMPLES OR CUSTOMER/END-USER APPROVED SAMPLES.

2.2.9 DRAWINGS SHALL BE COORDINATED WITH MATING PARTS FOR PROPER CLEARANCE ON PRESS AND SLIP FITS. DRAWINGS WILL BE COMPARED WITH THE MACHINERY HAND BOOK FOR NOMINAL TOLERANCES AND PROPER MACHINING PRACTICES.

2.2.9 ALL **intMPE, Inc.**, RELEASED FOR PRODUCTION DRAWINGS MUST BE IN ACCORDANCE TO ACCEPTED STANDARDS AS NOTED BY ANSI AND/OR API-610 DESIGN(S). CASTING DRAWINGS SHALL BE ADDITIONALLY MARKED WITH WEIGHT.

2.3 DESIGN CHANGES

2.3.1 PRODUCT DESIGNS SHALL NOT BE CHANGED WITHOUT APPROVAL OF THE PRODUCT ENGINEERING SUPERVISOR OR DESIGNATE.

2.3.2 DESIGN CHANGES REQUESTED AFTER DESIGNS ARE COMPLETED, REVIEWED, VERIFIED AND APPROVED SHALL BE SUBMITTED IN THE FORM OF A "DRAWING REVISION REQUEST" TO THE PRODUCT ENGINEERING DEPARTMENT.

2.3.2.1 THE **intMPE, Inc.**, PRODUCT ENGINEERING SUPERVISOR OR DESIGNATE SHALL REVIEW "DRAWING REVISION REQUESTS" FOR COMPLIANCE TO APPLICABLE STANDARDS.

2.3.2.2 ANY DESIGN CHANGE SHALL BE DOCUMENTED ON THE DRAWING.

2.3.2.3 THE DESIGN CHANGE SHALL BE PROCESSED IN THE SAME MANNER AS THE ORIGINAL DESIGN REVIEW.

2.3.3 DESIGN CHANGES WHICH AFFECT INTERCHANGE-ABILITY OF COMPONENTS WILL REQUIRE REVIEW OF ALL ASSOCIATED ITEMS.

2.3.4 ALL DESIGN CHANGES REQUESTED BY THE CUSTOMER/END-USER SHALL CARRY A PART NUMBER SUFFIX OF "NS-;" AND THE REVISION NUMBER.

2.4 DESIGN ADEQUACY

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2.4.1 THE **intMPE, Inc.**, PRODUCT ENGINEERING SUPERVISOR OR DESIGNATE SHALL ENSURE DESIGN CHANGES MEET OR EXCEED THE CRITERIA OF ALL APPLICABLE ANSI/API-610 STANDARDS AND CODES. A COPY OF REVISED DRAWING(S) WILL BE FORWARDED TO THE PRODUCING PLANT.

3.0 PROCUREMENT CONTROL

3.1 PURCHASING SPECIFICATION CONTROL

3.1.1 ALL DEPARTMENTS SHALL SEND A REQUISITION WITH THE JOB NUMBER TO PURCHASING FOR ORDER OF MATERIAL(S). REQUISITIONS MUST BE SENT TO THE **intMPE, Inc.** BUYER ASSIGNED FOR THAT PRODUCT.

3.1.2 THE SELECTION OF **intMPE, Inc.**, VENDORS IS THE RESPONSIBILITY OF PURCHASING AND QUALITY ASSURANCE PERSONNEL.

3.1.3 PURCHASING SHALL HAVE THE RESPONSIBILITY OF CONVEYING THE TECHNICAL DOCUMENTS (DRAWINGS, AND MATERIAL SPECIFICATIONS) TO THE VENDOR.

3.1.4 IT IS THE VENDORS' RESPONSIBILITY TO ADHERE TO PROPER MANUFACTURING SPECIFICATIONS TO ASSURE ANSI/API-610 QUALITY.

3.2 MATERIAL PURCHASE REQUISITION

3.2.1 **intMPE, Inc.**, PURCHASE ORDERS (EXHIBIT 04) SHALL CONTAIN ALL APPLICABLE INFORMATION TO PRODUCE THE ORDER WITH THE LATEST DRAWINGS AND/OR REVISIONS.

3.2.2 PURCHASE ORDERS SHALL REFERENCE ALL APPLICABLE SPECIFICATIONS AND ENGINEERING DOCUMENTS. COPIES OF ALL DOCUMENTS LISTED SHALL BE ATTACHED TO THE PURCHASE ORDER.

3.2.3 VENDORS MUST BE LISTED ON THE **intMPE, Inc.**, QUALIFIED VENDOR LIST. APPROVAL IS THE RESPONSIBILITY OF PURCHASING AND THE QUALITY ASSURANCE GROUP.

3.2.4 THE QUALIFIED VENDOR LIST SHALL CONTAIN, AS A MINIMUM.

A. VENDOR NAME AND ADDRESS.

B. APPROVED MATERIALS/SERVICES.

C. SPECIAL QUALIFICATION COMMENTS.

3.2.5 VENDORS SHALL BE REVIEWED AT THE DISCRETION OF THE QUALITY ASSURANCE

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DEPARTMENT.

3.3 SOURCE EVALUATION AND QUALIFICATION

3.3.1 QUALIFICATION OF VENDORS SHALL BE BY EVALUATION OF WORK PERFORMED ON SAMPLE LOTS AND DELIVERY PERFORMANCE.

3.3.2 PERIODIC REVIEW OF PRODUCT SHALL BE PERFORMED BY THE QUALITY ASSURANCE MANAGER TO DETERMINE THE CONSISTENCY AND QUALITY OF WORK PERFORMED.

3.4 RECEIVING INSPECTION

3.4.1 THE RECEIVING INSPECTION SHALL ASSURE THAT ALL PURCHASED ITEMS INCLUDING RAW MATERIALS, COMPONENT PARTS AND ITEMS WHICH HAVE BEEN SUBMITTED TO VENDORS FOR SUB-CONTRACTED SERVICES ARE VERIFIED BY THE RECEIVING INSPECTOR.

3.4.2 THE RECEIVING INSPECTOR SHALL ASSURE THAT INCOMING ITEMS ARE IN COMPLIANCE WITH THE REQUIREMENTS OF THE PURCHASE ORDER AND ENGINEERING CONTROL DEPARTMENT DESIGN.

3.4.3 MATERIAL REQUIRING TRACEABILITY SHALL BE HELD IN A SEGREGATED INSPECTION AREA UNTIL ALL REQUIREMENTS OF THE PURCHASE ORDER ARE MET. QUALITY ASSURANCE SHALL IDENTIFY THE MATERIAL TO INDICATE COMPLIANCE WITH APPLICABLE SPECIFICATIONS. MATERIALS WILL BE IDENTIFIED BY STAMPING THE HEAT NUMBER OR **intMPE, Inc.**, JOB NUMBER INTO THE PIECE. THE PURCHASE ORDER SHALL BE SIGNED BY THE BUYER AS PROOF OF THE ACCEPTANCE, AND THE MATERIAL MOVED TO STORAGE AREAS PRIOR TO PRODUCTION.

3.4.4 CERTIFIED MATERIAL TEST REPORTS SUBMITTED BY VENDORS WHEN REQUIRED MUST BE REVIEWED BY QUALITY ASSURANCE PRIOR TO RELEASE OF INCOMING ITEMS.

3.4.5 VENDORS INVOICES WILL BE PAYED WITHIN 30 DAYS OF DATE RECEIVED AFTER ITEMS ARE APPROVED FOR ASSEMBLY AND OR SHIPMENT BY THE QUALITY CONTROL DEPARTMENT. THIS PROCEDURE IS NOT EXPECTED TO DELAY INVOICES PAST THE NOMINAL 30 DAYS.

SECTION 4 - ENGINEERING PROCEDURES

4.1 CONTROL OF ENGINEERING DRAWINGS

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4.1.1 IT WILL BE THE RESPONSIBILITY OF THE PRODUCT ENGINEERING MANAGER TO ASSURE THAT ALL **intMPE, Inc.**, MECHANICAL DRAWINGS USED FOR PRODUCTION FOLLOW ENGINEERING GRAPHICS PROCEDURES AS SPECIFIED IN THE FOURTH EDITION BOOK BY; GIESECKE, MITCHELL, SPENCER, HILL, LOVING AND DYGDON.

4.1.2 CODES FOR MATERIAL SUCH AS ASTM, AISI, MIL, QQ, AMS AND UNS WILL BE STRICTLY ADHERED TO AS APPLICABLE UNLESS OTHERWISE STATED BY THE CUSTOMER AND/OR END-USER.

4.1.3 **intMPE, Inc.**, LA SALLE STEEL'S STRESS PROOF HIGH STRENGTH MATERIAL WILL BE USED AS STANDARD FOR ALL MACHINED SHAFTS USED ON PUMPS AND IN NON ABRASIVE AND NON CORROSIVE ATMOSPHERES. THIS MATERIAL IS SUPERIOR TO 4140 AND HAS A YIELD STRENGTH RANGE FROM 100,000 PSI TO 165,000 PSI AND REQUIRES NO HEAT TREATING AFTER MACHINING.

4.1.4 HARTWELL TUNGSTEN CARBIDE PRODUCTS AND PROCEDURES WILL BE USED AS **intMPE, Inc.**, STANDARD FOR ALL HARD SURFACING WHEN OTHER APPLICATIONS ARE NOT SPECIFIED BY THE END-USER.

4.1.5 ANSI AND/OR API-610 SPECIFICATIONS FOR COMPONENT DESIGN AND OPERATING STANDARDS WILL BE ADHERED TO UNLESS OTHERWISE SPECIFIED AND AUTHORIZED IN WRITING BY THE END-USER.

4.1.6 ASSEMBLY DRAWINGS SHALL BE PREPARED TO SHOW THE FABRICATION OR ASSEMBLY OF TWO OR MORE PARTS.

4.2 CONTROL OF REVISIONS TO DRAWINGS AND STANDARDS

4.2.1 ALL ENGINEERING CHANGES SHALL BE SUBJECT TO THE SAME REVIEW AND RECORDED ON THE (EXHIBIT 11) DRAWING REVISION REQUEST FORM.

4.2.2 REVISIONS WHICH AFFECT INTER-CHANGE OF COMPONENTS SHALL REQUIRE REVIEW OF ALL PARTS TO VERIFY INTER-CHANGE. SLIP FITS AND PRESS FITS WILL BE HELD TO STANDARD ALLOWANCES UNLESS OTHERWISE REQUESTED BY THE END-USER.

4.2.3 WHEN IMMEDIATE REVISIONS ARE REQUIRED ON PRODUCT DRAWINGS IN THE SHOP, THE REVISION SHALL BE WRITTEN ON THE DRAWING WITH THE DATED APPROVAL OF THE ENGINEERING SUPERVISOR OR DESIGNATE. IT IS THE RESPONSIBILITY OF PRODUCTION CONTROL TO ENSURE THAT A REVISED DRAWING IS PLACED IN ALL OTHER ORDER PACKETS AFFECTED BY THE EMERGENCY CHANGE. PRODUCTION CONTROL SHALL RETURN THE REVISED DRAWING TO PRODUCT ENGINEERING UPON COMPLETION.

4.2.4 ALL OTHER DRAWING COPIES SHALL BE DESTROYED AFTER THE PRODUCTION ORDER IS COMPLETED.

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4.3 CONTROL OF PRODUCTION ORDER DOCUMENTS

4.3.1 **intMPE, Inc.**, PRODUCTION ORDERS SHALL BE MAINTAINED SHOWING DATE OF MOVEMENT FROM ONE WORK AREA TO ANOTHER. CUSTOMERS WILL BE IMMEDIATELY INFORMED OF ORDER STATUS UPON REQUEST TO SALES OR PRODUCTION.

4.3.2 EACH TEST OR INSPECTION SHALL BE SIGNED OR STAMPED AND DATED ON THE PRODUCTION ORDER. ANY REJECTION OR VARIANCE SHALL REQUIRE THE PREPARATION OF THE VARIANCE REPORT DATED AND SIGNED GIVING REASON FOR THE VARIANCE OR REJECTION. NO ITEM WILL PROGRESS WITHOUT THIS FORM. EXCEPTIONS TO THIS MAY BE GRANTED BY ENGINEERING SUPERVISOR.

4.3.3 UPON COMPLETION OF ALL INSPECTIONS AND TESTS THE **intMPE, Inc.**, FINISHED PRODUCT SHALL BE DELIVERED TO THE WAREHOUSE. PART IDENTIFICATION IS STAMPED ON EACH ITEM AND THE PRODUCTION ORDER IS SIGNED OFF AFTER UP-DATING INVENTORY RECORDS. ORDER IS SENT TO SHIPPING FOR RELEASE OF ITEM(S) TO CUSTOMER(S). TIME RECORDS ARE RETURNED TO THE PRICING DEPT.

4.4 CONTROL OF QUALITY ASSURANCE STANDARDS

4.4.1 QUALITY ASSURANCE STANDARDS (QAS) MANUALS ARE CONTROLLED TO ASSURE ALL DEPARTMENTS FOLLOW PROPER PROCEDURES IN; PRODUCTION, CALIBRATION, TESTING, STORAGE AND PACKAGING ETC. MANUALS WRITTEN FOR INTERNAL INSPECTION PROCEDURES SHALL BE APPROVED BY THE QUALITY ASSURANCE MANAGER ONLY.

4.4.2 **intMPE, Inc.**, QUALITY ASSURANCE PLANS (QAP) ARE WRITTEN FOR EACH CUSTOMER ORDER WHERE PRODUCTS HAVE SPECIAL REQUIREMENTS OTHER THAN ANSI OR API-610 . THE QUALITY ASSURANCE MANAGER USING THE CUSTOMERS INSTRUCTIONS SHALL DEVELOP A QAP WHICH GIVES DETAILED INSTRUCTIONS TO ENSURE COMPLIANCE. EACH QAP DEVELOPED TO COMPLY WITH SPECIAL CUSTOMER REQUIREMENTS SHALL BE REVIEWED AND APPROVED BY THE PRODUCTION MANAGER.

4.4.3 COPIES OF EACH QAP SHALL BE ISSUED WITH THE PRODUCTION ODER.

5.0 IDENTIFICATION AND CONTROL OF ITEMS

5.1 TRACEABILITY PROGRAM

5.1.1 **intMPE, Inc.**, PURPOSE IS TO ESTABLISH A SYSTEM WHEREBY ALL ITEMS CAN BE TRACED FROM START TO FULFILLMENT AND DOCUMENTED IN A MANNER SUITABLE TO CONFORM TO ANSI/API-610 OR REQUIREMENTS OF THE CUSTOMER.

5.1.2 CUSTOMER ORDER PROCESSING

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5.1.2.1 UPON RECEIPT OF CUSTOMER ORDER, ORDER ENTRY DEPARTMENT SHALL PREPARE A JOB FOLDER. THE JOB FOLDER SHALL SPECIFY ALL CUSTOMER REQUIREMENTS.

5.1.2.2 **intMPE, Inc.**, ENGINEERING DEPARTMENT SHALL DETERMINE INSPECTION PROCEDURES AND INSPECTION EQUIPMENT TO FULFILL CUSTOMER REQUIREMENTS.

5.1.2.3 WAREHOUSE PERSONNEL SHALL REVIEW THE JOB FOLDER AND CHECK STOCK FOR INVENTORY.

5.1.2.4 WAREHOUSE PERSONNEL SHALL FORWARD TO ORDER ENTRY THE JOB FOLDER WITH INVENTORY STATUS AND OTHER COMMENTS.

5.1.3 PROCESS FORMS

5.1.3.1 **intMPE, Inc.**, PRODUCTION CONTROL SHALL PREPARE NONE STOCK ITEMS FOR PRODUCTION AS PREVIOUSLY SPECIFIED.

5.1.4 MATERIAL PROCUREMENT

5.1.4.1 PURCHASING SHALL PREPARE THE PURCHASE ORDER FROM THE JOB FOLDER FOR ALL BUY-OUT ITEMS. THE PURCHASE ORDER SHALL INCLUDE THE JOB NUMBER AND LIST ALL MATERIAL SPECIFICATIONS.

5.1.5 RECEIVING OF MATERIAL/COMPONENTS

5.1.5.1 THE RECEIVING INSPECTOR SHALL INSPECT THE MATERIAL/COMPONENTS PER PURCHASE ORDER REQUIREMENT.

5.1.5.2 ON CAST ITEMS THE RECEIVING INSPECTOR VERIFIES PARTS ARE FROM THE HEAT NUMBER LISTED ON THE SUPPLIER'S CHEMISTRY REPORT WITH THE STAMPED/CAST HEAT NUMBER ON THE MATERIAL RECEIVED.

5.1.5.3 AFTER APPROVAL OF APPLICABLE CHEMICAL ANALYSIS, RADIOGRAPHY, HEAT TREATMENT, OR ANY OTHER CUSTOMER REQUIREMENT FOR CASTINGS THE INVENTORY CONTROL DEPARTMENT SHALL RELEASE THEM FOR PRODUCTION.

5.1.5.4 AS THE CASTING IS PROCESSED THROUGH THE SHOP, THE FOREMAN AND INSPECTOR WILL ENSURE THAT:

A. HEAT NUMBER IS RETAINED WITH THE PART DURING MACHINING OPERATIONS.

B. CUSTOMERS WILL BE NOTIFIED BY QUALITY ASSURANCE WHEN JOBS ARE AT A REQUIRED INSPECTION POINT TO SEND IN THEIR INSPECTOR(S). JOBS CANNOT PROCEED PAST THIS POINT UNLESS SIGNED OFF BY THE CUSTOMER.

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C. ALL INSPECTION OPERATIONS SHALL BE STAMPED AND/OR INITIALED BY THE INSPECTOR.

D. THE SHOP FOREMAN SHALL INSTRUCT MACHINE OPERATORS TO FOLLOW THE MANUFACTURING PROCEDURES ON THE JOB SEQUENCE OF OPERATION.

5.1.5.6 UPON COMPLETION OF PROCESSING, THE FINAL INSPECTOR SHALL INSPECT PARTS WITH APPLICABLE GAGES PER DRAWING AND SPECIFICATION. ITEMS REQUIRING CUSTOMER INSPECTION, QUALITY ASSURANCE SHALL CONTACT THE CUSTOMER INSPECTOR OR HIS REPRESENTATIVE.

5.1.6 FINAL INSPECTION BEFORE SHIPMENT

5.1.6.1 THE INSPECTOR SHALL VISUALLY INSPECT THE PARTS FOR OVERALL APPEARANCE. THE INSPECTOR SHALL DIMENSIONAL INSPECT THE PART AGAINST THE ENGINEERING DRAWING AND STAMP AND/OR SIGN APPROPRIATE DOCUMENTS TO APPROVE SHIPMENT AND INSTRUCT SHIPPING FOR PROPER PACKAGING TO SUPPORT PART INTEGRITY DURING HANDLING.

5.1.6.2 FINISHED COMPONENT SHALL BE TAGGED WITH A **intMPE**, Inc. (EXHIBIT 05) .

5.1.7 DOCUMENTATION

5.1.7.1 THE SALES DEPARTMENT SHALL COLLECT DATA AND RECORDS TO ESTABLISH AND MAINTAIN FILES FOR ALL CUSTOMER ORDERS.

5.1.7.2 THE QUALITY ASSURANCE DEPARTMENT SHALL MAINTAIN FILES THAT CONTAIN RAW MATERIAL CHEMICAL ANALYSIS, HEAT TREAT CERTIFICATIONS, HARDNESS TESTS, PRODUCT FUNCTIONAL TESTS, NONDESTRUCTIVE TEST AND CHECKLISTS ETC.

5.2 MATERIAL IDENTIFICATION PROGRAM

5.2.1 THIS MATERIAL IDENTIFICATION PROGRAM SHALL BE USED TO IDENTIFY AND CONTROL THE PRODUCTS COVERED BY THIS QUALITY ASSURANCE MANUAL

5.2.2 CASTING OR FORGING SHALL BE PURCHASED BY PART NUMBER AND ASTM MATERIAL SPECIFICATIONS.

5.2.2.1 BAR-STOCK OR PLATE, INTENDED FOR USE IN MAKING MACHINED OR WELDED PARTS, SHALL BE PURCHASED BY ASTM MATERIAL SPECIFICATIONS WITH CODING STAMPED ON EACH PIECE.

5.2.2.2 THE RECEIVING INSPECTOR SHALL VISUALLY INSPECT EACH ITEM FOR CODES

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MATCHING THE ASTM NUMBER LISTED ON THE PURCHASE ORDER.

5.2.2.3 THE BAR-STOCK OR PLATE SPECIFIED IN PARAGRAPH 5.2.2.1 SHALL BE IDENTIFIED BY STAMPING OR STENCILING THE PRODUCTION WORK ORDER NUMBER ON THE PART, AFTER THE FIRST MACHINING OPERATION.

5.2.3 FINISHED BUY-OUT SHALL BE PACKAGED, AND MARKED BY THE VENDOR WITH PRODUCTION WORK ORDER NUMBER THAT SHALL IDENTIFY MATERIAL BY PART NUMBER AND ASTM CODE.

5.2.4 ALL PRODUCTION COMPONENTS SHALL BE MARKED WITH JOB ORDER NUMBER AND SHALL REMAIN ON/WITH THE PART FROM RAW TO FINISHED PART INSPECTION AND SIGN OFF.

5.2.5 ASSEMBLIES SHALL BE TAGGED WITH MATERIAL IDENTIFICATION TAGS AT THE TIME OF ASSEMBLY AND TAGS SHALL REMAIN WITH ASSEMBLY UNTIL FINAL INSPECTION AND APPROVAL BY QUALITY ASSURANCE.

5.2.6 THE HARDNESS TEST MARK ON NON-SERIALIZED PARTS SHALL SERVE AS FURTHER VERIFICATION OF PHYSICAL PROPERTIES AFTER HEAT TREATMENT.

5.2.7 CARE SHALL BE TAKEN TO KEEP PARTS PROPERLY MARKED AND SEGREGATED BOTH AS INDIVIDUAL COMPONENTS AND ASSEMBLIES.

5.2.8 CONTROLLED MANUFACTURE OF RAW MATERIAL MAY BE NON-DESTRUCTIVELY TESTED BY QUALITY CONTROL FOR STOCK PURPOSES. SUCH MATERIAL SHALL BE IDENTIFIED BY HEAT NUMBER. THE MATERIAL SHALL BE COLOR CODED AND DOCUMENTED PRIOR TO BEING PLACED IN STOCK IN THE CORRECT STORAGE AREA.

6.0 CONTROL OF PROCESSES

6.1 WELDING

6.1.1 MATERIALS AND WELDING PROCEDURES AS PUBLISHED BY THE INTERNATIONAL NICKEL CO. (INCO) FROM TIME TO TIME SHALL BE USED FOR FABRICATION OF ALL HEAT AND CORROSION RESISTANT ALLOYS. OTHER INDUSTRY STANDARDS FOR WELDING SHALL BE USED AS REQUIRED BY ANSI AND/OR API-610 SPECIFICATIONS. WELDING FILLER METAL MATERIALS SHALL BE PURCHASED FROM MANUFACTURERS LISTED BY THE AMERICAN WELDING SOCIETY IN AWS AR. 0-78 FILLER METAL COMPARISON CHART. THESE MATERIALS SHALL MEET THE APPLICABLE CODE AND/OR THE CUSTOMER/END-USER SPECIFICATION.

6.1.2 THE WELDING MATERIAL PURCHASE ORDER SHALL SPECIFY AWS AND/OR ASME REQUIREMENTS, TYPE, SIZE. WHEN REQUIRED IT SHALL ALSO SPECIFY A REQUEST FOR MATERIAL CERTIFICATION WITH ACTUAL OR TYPICAL CHEMICAL ANALYSIS MECHANICAL PROPERTIES DATA. IT SHALL INCLUDE ANY SPECIAL REQUIREMENTS REQUESTED BY

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intMPE, Inc. OR ITS CUSTOMER.

6.1.3 AN INSPECTION SHALL BE PERFORMED ON ALL INCOMING MATERIAL TO CHECK FOR POSSIBLE DAMAGE ENCOUNTERED DURING SHIPMENT. VENDOR CERTIFICATION SHALL BE COMPARED WITH THE REQUIREMENTS ON THE PURCHASE ORDER.

6.1.4 APPROVED MATERIAL SHALL BE SENT TO THE WELDING MATERIAL STORAGE AREA.

6.1.5 THE **intMPE, Inc.**, QUALITY ASSURANCE DEPARTMENT SHALL MAINTAIN A FILE OF ALL WELD FILLER MATERIAL CERTIFICATION REPORTS WITH COPIES OF PURCHASE ORDERS AS PERMANENT RECORD FOR FIVE (5) YEARS.

6.1.6 WELDING PROCEDURES

6.1.6.1 THIS PROCEDURE IS APPLICABLE TO THE REPAIR OF DISCONTINUITIES ENCOUNTERED IN THE PROCESSING OF CASTINGS THROUGH THE PLANT.

6.1.6.2 THE THICKNESS OF BASE MATERIAL FOR WHICH THIS PROCEDURE IS APPLICABLE IS FROM 3/16 TO 5 INCHES.

6.1.6.3 ALL WELDING SHALL BE CARRIED OUT IN THE FLAT POSITION, IF POSSIBLE.

6.1.6.4 **intMPE, Inc.**, CASTINGS SHALL BE WELDED IN THE ANNEALED OR NORMALIZED CONDITION.

6.1.6.5 AMERICAN WELDING SOCIETY RECOMMENDATIONS WILL BE FOLLOWED FOR PRE-HEAT TEMPERATURE, INTER-PASS TEMPERATURE, AND ANY POST WELD HEAT TREATMENT.

6.1.6.6 THE TYPE WELDING PROCESS AND PROCEDURE SHALL BE DETERMINED BY JOINT DECISION BETWEEN WELDER AND QUALIFIED PRODUCTION CONTROL MEMBER. APPLICABLE CODES AND STANDARDS SHALL BE FOLLOWED AS DETERMINED BY THE QUALITY ASSURANCE DEPARTMENT.

6.1.6.7 PREPARATION OF DISCONTINUITIES FOR WELDING MAY BE PERFORMED BY CARBON ARC GOUGING, FLAME CUTTING, GRINDING OR MACHINING. THIS PREPARATION SHALL BE FREE OF SLAG, SCALE, RUST AND/OR OTHER IMPURITIES BEFORE WELDING. SLAG AND WELD SPATTER SHALL BE REMOVED BETWEEN PASSES BY CHIPPING, BRUSHING, OR GRINDING.

6.1.6.8 **intMPE, Inc.**, ELECTRODES SHALL BE STORED IN DRY STORAGE OVENS AT A TEMPERATURE BETWEEN 250 DEGREES F' AND 350 DEGREES F' UNTIL IMMEDIATELY BEFORE USE.

6.1.6.9 ELECTRODES OVER-EXPOSED TO THE ATMOSPHERE (TIME DEPENDENT ON

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CONDITION) AND ELECTRODES TAKEN FROM DAMAGED CANS OR CONTAINERS SHALL BE RE-BAKED IN A VENTED OVEN/FURNACE AT A TEMPERATURE OF 700 DEGREES F TO 800 DEGREES F. FO AT LEAST ONE HOUR BEFORE TRANSFERRING TO A DRY ROD STORAGE OVEN.

6.2 NONDESTRUCTIVE TESTING

6.2.1 ALL NONDESTRUCTIVE TESTING AND RADIOGRAPHIC TESTING SHALL BE PERFORMED BY OUTSIDE VENDORS. VENDORS PERFORMING NONDESTRUCTIVE TESTING FOR **intMPE, Inc.** SHALL MAINTAIN DOCUMENTATION VERIFYING THEIR TEST EQUIPMENT CALIBRATION IS TRACEABLE TO THE NATIONAL BUREAU OF STANDARDS. OUTSIDE VENDORS SHALL CONFORM TO SNT-TC-1A SPECIFICATIONS.

6.2.2 ALL RADIOGRAPHIC FILM AND NONDESTRUCTIVE TESTING RESULTS SHALL BE MAINTAINED AS PERMANENT RECORDS BY THE QUALITY ASSURANCE DEPARTMENT FOR A PERIOD OF FIVE (5) YEARS.

6.3 HEAT TREATING

6.3.1 ALL HEAT TREATING FACILITIES UTILIZED BY **intMPE, Inc.**, SHALL BE EQUIPPED WITH TIME VS. TEMPERATURE RECORDING DEVICES WHICH PROVIDE HEAT TREAT CHARTS AS A PERMANENT RECORD OF EACH OPERATION. ALL HEAT TREATING EQUIPMENT MONITORING INSTRUMENTATION SHALL BE CALIBRATED. CALIBRATIONS SHALL BE TRACEABLE TO THE NATIONAL BUREAU OF STANDARDS.

6.3.2 PRODUCTION ORDERS SHALL SPECIFY THE APPLICABLE HEAT TREATING SPECIFICATIONS.

6.3.3 HEAT TREATING OPERATIONS PERFORMED BY OUTSIDE VENDORS MUST BE ON THE APPROVED VENDORS LIST.

6.3.4 VENDORS WILL BE REQUIRED TO SUBMIT WRITTEN PROCEDURES DOCUMENTING THEIR HEAT TREATING OPERATIONS WHEN CUSTOMER SPECIFICATIONS REQUIRE SUCH DOCUMENTATION.

6.4.1 MACHINING, ASSEMBLY AND OTHER

6.4.1 PROBLEMS ARISING FROM MACHINING SHALL BE INVESTIGATED BY THE MANUFACTURING ENGINEERING DEPARTMENT AND IF NECESSARY, CORRECTIVE ACTION TAKEN TO PREVENT RECURRENCE. THE CORRECTIVE ACTION REVIEW BOARD MAY BE SUMMONED IF SUCH NEED ARISES.

6.4.2 **intMPE, Inc.**, MACHINING OPERATIONS SHALL BE PERFORMED IN ACCORDANCE

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WITH INSTRUCTIONS SPECIFIED ON THE PRODUCTION ORDER.

6.4.3 AFTER MACHINING IS COMPLETED, THE PARTS SHALL BE INSPECTED ACCORDING TO ENGINEERING DRAWINGS AND PRODUCTION ORDER.

6.4.4 ON ACCEPTABLE ITEMS, THE INSPECTOR SHALL STAMP THE PART WHERE PRACTICAL WITH HIS IDENTIFICATION SYMBOL AND INITIAL THE PRODUCTION ORDER. ON UNACCEPTABLE ITEMS, A VARIANCE REPORT (EXHIBIT 06) SHALL BE COMPLETED, ROUTED, AND INSERTED INTO THE PRODUCTION ORDER AND REFERENCED.

6.4.5 THE **intMPE, Inc.**, INSPECTOR SHALL PROVIDE PROPER SAFE-GUARDING OF HIS IDENTIFICATION SYMBOL TO PROHIBIT FRAUDULENT USE.

6.4.6 OTHER TESTS, SUCH AS CON-DESTRUCTIVE TESTING, SHALL BE PERFORMED AS REQUIRED BY THE CUSTOMER OR **intMPE, Inc.**, SPECIFICATIONS.

6.5 PATTERNS FOR SAND MOLDING

6.5.1 THIS PROCEDURE SHALL BE FOR THE SET UP, INSPECTION, USE AND STORAGE OF ALL PATTERNS MADE OF WOOD OR METAL WHICH ARE FURNISHED BY THE CUSTOMER OR PRODUCED BY THIS COMPANY FOR OUR CUSTOMERS FOR SAND MOLDING.

6.5.2 PATTERNS

6.5.2 PATTERNS RECEIVED SHALL BE CHECKED AGAINST DELIVERY TICKET BY THE RECEIVING DEPARTMENT.

6.5.3 PATTERNS SHALL BE INSPECTED FOR ALL SIGNS OF DAMAGE AND WEAR AGAINST ENGINEERING APPROVED DRAWINGS.

6.5.4 PATTERN RECORD CARD (EXHIBIT 12) SHALL BE MADE SHOWING DATE RECEIVED, CUSTOMER, PATTERN PIECES, NUMBER OF CORE BOXES AND LOOSE PIECES, AND A STATEMENT COVERING CONDITION OF EACH.

6.5.5 THE FOLLOWING SUBSECTIONS 6.5.3.1 UP TO 6.5.3.3 SHALL BE THE RESPONSIBILITY OF PRODUCTION CONTROL.

6.5.3 PATTERN INSPECTION

6.5.3.1 EACH NEW PATTERN SHALL BE CHECKED BY PRODUCT ENGINEERING.

6.5.3.2 DIMENSIONS OF PATTERN SHALL BE MEASURED TO DETERMINE IF PATTERN IS

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MADE TO CONFORM TO LINEAR SHRINKAGE AND ENOUGH ALLOWANCE HAS BEEN MADE FOR MACHINE STOCK.

6.5.4 PATTERN MOUNTING /CENTER

6.5.4.1 THE FOUNDRY SHALL BE RESPONSIBLE TO DETERMINE TYPE OF EQUIPMENT, NUMBER OF PATTERNS, LOCATION OF PATTERNS ON BOARD/PLATES AND THE SET UP OF PROPER GATING RISING.

6.5.5 PATTERN REVISION

6.5.5.1 IF DISCREPANCIES ARE EVIDENT THAT AFFECT THE MANUFACTURING, MACHINING OR END USE OF THE PRODUCT, A HOLD SHALL BE ISSUED BY A PRODUCT ENGINEER.

6.5.5.2 A PRODUCT ENGINEER SHALL PREPARE THE PATTERN CHANGE OR CORE CHANGE ON THE PURCHASE ORDER (EXHIBIT 04) AND GIVE TO THE BUYER FOR NECESSARY ACTION.

6.5.5.3 IN CASE PATTERN REVISION ORIGINATES FROM THE CUSTOMER SALES WILL BE INFORMED. A PRODUCT ENGINEER SHALL PREPARE THE PATTERN CHANGE OR CORE CHANGE AND GIVE TO THE BUYER FOR NECESSARY ACTION.

6.5.6 PATTERN STORAGE

6.5.6.1 WHEN EXISTING PRODUCTION WORK ORDERS ARE COMPLETED, PATTERNS SHALL BE SENT TO PATTERN STORAGE.

6.5.6.2 PATTERNS SHALL BE INSPECTED BY FOUNDRY DIVISION MANAGER AND CONDITION NOTED ON PATTERN STORAGE CARD.

6.5.6.3 PATTERNS SHALL BE STORED IN RACKS AND EVERY EFFORT MADE TO PREVENT DAMAGE FROM HUMIDITY AND OTHER.

6.5.7 PATTERN REPAIR

6.5.7.1 WHEN PATTERN REPAIRS ARE NEEDED, PRODUCT ENGINEERING SHALL SEND A REPORT TO PRODUCTION CONTROL TO HAVE IT FIXED. A COPY OF THE REPORT SHALL BE KEPT IN THE PATTERN RECORDS AS A PART OF QUALITY ASSURANCE RECORDS.

7.0 INSPECTION

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7.1 INSPECTION PROGRAM

7.1.1 ALL **intMPE, Inc.**, PRODUCTS SHALL BE INSPECTED TO THE REQUIREMENTS OF THE APPLICABLE ENGINEERING DRAWINGS AND SPECIFICATIONS AS LISTED ON PURCHASE ORDERS AND PRODUCTION ORDERS. INSPECTION SHALL BE PERFORMED ON RAW MATERIALS, COMPONENT PARTS, AND FINISHED ASSEMBLIES.

7.1.2 RECEIVING INSPECTION SHALL BE PERFORMED ON PURCHASED MATERIALS (RAW MATERIAL OR FINISHED PARTS), AND MATERIALS ON WHICH SUBCONTRACTED OPERATIONS ARE PERFORMED. IF ANY TESTS ARE PERFORMED ON RAW MATERIALS, TEST RESULTS SHALL BE MADE AVAILABLE UPON REQUEST.

7.1.3 IN-PROCESS AND FINAL INSPECTION BY **intMPE, Inc.**, SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS AS SPECIFIED ON THE PRODUCTION ORDER AND ANY REFERENCED SPECIFICATION ON THAT DOCUMENT. ALL SUCH INSPECTION OPERATIONS SHALL BE SIGNED OFF BY THE INSPECTOR, OR STAMPED WITH AN INSPECTOR'S I.D. STAMP AFTER SATISFACTORY COMPLETION OF THE INSPECTION.

7.1.4 PARTS GOING TO ASSEMBLY FOR STANDARD PRODUCTS SHALL BE CONSIDERED CONFORMING AND TO THE LATEST REVISION. THEREFORE, THE QUALITY ASSURANCE DEPARTMENT SHALL BE NOTIFIED IMMEDIATELY OF ANY STANDARD PARTS FROM STOCK DISCOVERED AS BEING NON-CONFORMING AT ASSEMBLY. SUCH PARTS WILL BE REVIEWED BY THE QUALITY ASSURANCE DEPARTMENT FOR APPROPRIATE CORRECTIVE ACTION. INSPECTION WILL RE-INSPECT THE WHOLE STOCK TO REMOVE ALL NON-CONFORMING MATERIAL IMMEDIATELY.

7.1.5 AFTER COMPLETION OF CONTROLLED PART INSPECTIONS, THE INSPECTOR SHALL STAMP THE PART WITH HIS IDENTIFYING SYMBOL AND THE **intMPE, Inc.**, IDENTIFYING STAMP AND **intMPE, Inc.**, JOB NUMBER.

7.1.6 ALL PRODUCTS SHALL BE TAGGED WITH A SPECIAL **intMPE, Inc.**, IDENTIFICATION TAG AFTER COMPLETION OF ALL REQUIRED INSPECTIONS (WHETHER THE PRODUCTS ARE PARTS OR ASSEMBLIES) PRIOR TO THE PARTS/ASSEMBLIES BEING MOVED TO INVENTORY OR END USER.

7.1.7 NON-CONFORMING MATERIAL DISCOVERED DURING INSPECTION OPERATION SHALL BE IDENTIFIED WITH A VARIANCE REPORT FORM (EXHIBIT 06) AND SEGREGATED FROM ACCEPTABLE MATERIAL.

7.1.8 ANY PARTS NOT CONFORMING SHALL BE LABELED WITH RED INK AND PLACED ON A SPECIAL VARIANCE SHELF OR AREA.

7.1.9 ALL MEASUREMENT STANDARDS SHALL BE TRACEABLE TO STANDARDS MAINTAINED BY THE NATIONAL BUREAU OF STANDARDS.

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7.1.10 CALIBRATION OF ALL EQUIPMENT SHALL BE DONE SEMI-ANNUALLY. CALIBRATION RECORDS ARE TO BE KEPT INDICATING ALL EQUIPMENT TO BE CALIBRATED TO WHICH STANDARD, INTERVALS, DUE DATES AND FACILITY.

7.2 QUALIFICATION OF QUALITY CONTROL PERSONNEL

7.2.1 **intMPE, Inc.**, QUALITY CONTROL INSPECTORS SHALL UNDERGO A TRAINING EVALUATING PROGRAM TO ATTAIN PROFICIENCY ON ALL AREAS OF INSPECTION. THESE AREAS SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:

1. GAGE CONTROL INSPECTION
2. FINAL INSPECTION
3. IN-PROGRESS INSPECTION
4. CASTING INSPECTION
5. RECEIVING INSPECTION

7.2.2 THE TRAINING OF NEW **intMPE, Inc.**, EMPLOYEES SHALL INVOLVE SUPERVISION TO ASSURE SUBJECT COMPREHENSION THAT INSPECTION TECHNIQUES ARE BEING PERFORMED IN ACCORDANCE WITH ESTABLISHED PROCEDURES. THE QUALITY ASSURANCE MANAGER MAY, AT HIS/HER DISCRETION, LENGTHEN OR SHORTEN EACH PHASE OF TRAINING ACCORDING TO THE PROGRESS OF THE INDIVIDUAL.

7.2.3 INCLUDED IN TRAINING SHALL BE FAMILIARIZATION WITH ALL EXISTING STANDARDS, PROCEDURES, CUSTOMER SPECIFICATIONS AND ANY OTHER SPECIFICATIONS DICTATING QUALITY STANDARDS TO BE FOLLOWED.

7.2.4 UPON COMPLETION OF EACH PHASE OF TRAINING, SUCH TRAINING SHALL BE DOCUMENTED AND FILED WITH THE **intMPE, Inc.**, QUALITY ASSURANCE MANAGER.

8.0 TEST CONTROL

8.1 HYDROSTATIC TESTING

8.1.1 A **intMPE, Inc.**, HYDROSTATIC TEST SHALL BE CONDUCTED BY OUTSIDE VENDOR TO QUALIFY SPECIAL DESIGNS AND TO DEMONSTRATE HYDROSTATIC INTEGRITY WHEN SO SPECIFIED BY THE APPLICABLE STANDARD OR CUSTOMER SPECIFICATION.

8.1.2 WHEN SO REQUESTED BY THE CUSTOMER/END-USER, HYDROSTATIC TESTING SHALL BE CONDUCTED FOLLOWING A WRITTEN APPROVED TEST PROCEDURE. THE RESULTS FOR

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THE TEST SHALL BE RECORDED ON THE **intMPE, Inc.**, PROCEDURE FORM AND SHALL BE ATTACHED TO THE PRODUCTION ORDER.

9.0 CONTROL OF MEASURING AND TEST EQUIPMENT

9.1 CALIBRATION OF GAGES AND TESTING EQUIPMENT

9.1.1 THIS **intMPE, Inc.**, PROCEDURE DESCRIBES THE METHODS, STANDARDS, AND SCHEDULE FOR CALIBRATION OF GAGES AND TESTING EQUIPMENT USED FOR PRODUCT ACCEPTANCE.

9.1.2 MEASURING EQUIPMENT SHALL BE CALIBRATED USING REFERENCE STANDARDS WHICH ARE CALIBRATED TO THE NATIONAL BUREAU OF STANDARDS. VENDOR CALIBRATION SERVICES MAY BE USED, PROVIDED THEY APPEAR ON THE APPROVED VENDORS LIST, AND THEIR CALIBRATION DEVICES ARE CERTIFIED TO THE NATIONAL BUREAU OF STANDARDS.

9.1.3 GAGES AND MEASURING EQUIPMENT SHALL BE ADEQUATELY PROTECTED WHEN NOT IN USE. DURING THE USE OF MEASURING EQUIPMENT PERIODIC CALIBRATION WILL BE PERFORMED TO PROTECT THEIR ACCURACY. SHOULD ANY GAGE OR MEASURING INSTRUMENT BE SUBJECTED TO CONDITIONS WHICH COULD AFFECT ITS ACCURACY IT MUST BE IMMEDIATELY RETURNED TO INSPECTION FOR EXAMINATION AND RE-CALIBRATION.

9.1.4 THE CALIBRATION FREQUENCY SHALL BE DETERMINED BY WEAR OR DAMAGE CONTRIBUTED BY USAGE. A CALIBRATION SCHEDULE (EXHIBIT 07) SHALL BE POSTED IN A CONSPICUOUS PLACE IN INSPECTION.

9.1.5 ALL MEASURING TOOLS AND EQUIPMENT USED FOR ACCEPTANCE INSPECTION OF FINISHED PARTS, SHALL BE CALIBRATED DAILY OR IMMEDIATELY PRIOR TO USE AND THE GAGE RECORD CARD ANNOTATED WITH THE DATE AND TECHNICIANS NAME.

9.1.6 DETAILED PROCEDURES USED BY **intMPE, Inc.**, IN THE CALIBRATION OF MEASURING AND TEST EQUIPMENT SHALL BE MAINTAINED BY QUALITY ASSURANCE.

9.1.7 GAGES SHALL NOT BE LOCKED UP OR RESTRICTED IN ANY WAY BY THE USER. WHEN RETURNED TO THE GAGE RACK, THE INSPECTOR WILL VISUALLY CHECK FOR INDICATIONS OF DAMAGE, MISUSE, OR OTHER APPARENT DEFECTS.

9.1.8 A **intMPE, Inc.**, INDIVIDUAL RECORD FORM AND GAGE CARD (EXHIBIT 08) SHALL BE MAINTAINED FOR EACH ITEM AND INDICATE A DESCRIPTION OF THE ITEM, THE RECORD OF CALIBRATION AND DATE. A UNIQUE GAGE NUMBER WILL BE MARKED ON THE GAGE IN AN AREA THAT WILL BE VISIBLE, YET NOT AFFECT ACCURACY OR PHYSICALLY DAMAGE THE GAGE.

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9.1.9 ENTRIES ON THE GAGE RECORD CARDS WILL BE MADE ONLY BY THE QUALITY ASSURANCE PERSONNEL. IT WILL BE THE RESPONSIBILITY OF THE QUALITY ASSURANCE PERSONNEL TO MAINTAIN AN ACCURATE, CURRENT AND COMPLETE GAGE RECORD CARD FILE.

9.1.10 **intMPE, Inc.**, MEASURING AND TESTING INSTRUMENTS SHALL BE CODED TO INDICATE CALIBRATION STATUS. THE CODE STICKERS SHALL INDICATE THE DUE DATE OF THE NEXT CALIBRATION.

9.1.11 **intMPE, Inc.**, INSPECTOR OWNED EQUIPMENT MAY BE USED FOR ACCEPTANCE INSPECTION, PROVIDED SUCH EQUIPMENT IS FIRST CALIBRATED AND IS ENTERED INTO A CALIBRATION CYCLE EQUAL TO ITS COMPANY OWNED COUNTERPART.

9.1.12 WHEN A GAGE IS DETERMINED TO BE INACCURATE (DAMAGE OR WORN) THE GAGE SHALL BE RED-TAGGED AND SEGREGATED FOR REPAIR OR REPLACEMENT.

10.0 INSPECTION, TEST AND OPERATING STATUS

10.1 CONTROL OF FINISHED PRODUCTS

10.1.1 AFTER COMPLETION OF ALL MANUFACTURING OPERATIONS THE **intMPE, Inc.** PARTS SHALL BE IDENTIFIED WITH A SPECIAL **intMPE, Inc.**, TAG (EXHIBIT 05) AND MOVED TO INVENTORY. THE PRODUCTION ORDER SHALL BE SIGNED OFF BY THE INSPECTOR PRIOR TO MOVING THE PARTS TO INVENTORY.

10.1.2 ALL TEST AND INSPECTION OPERATIONS SHALL BE INDICATED ON THE PRODUCTION ORDER, AND SHALL BE INDIVIDUALLY SIGNED OFF BY THE INSPECTOR AS EACH IS COMPLETED. THE PRODUCTION ORDER SHALL REMAIN WITH THE PART(S) DURING THE MANUFACTURE/ASSEMBLY PROCESS.

10.1.3 WHERE A PRODUCTION ORDER IS USED TO PROCESS PARTS (FOR REWORK) THE INSPECTIONS AND TEST REQUIRED SHALL BE DESIGNATED ON THE VARIANCE REPORT SIGNED OFF BY THE **intMPE, Inc.**, INSPECTOR AS THEY ARE COMPLETED. THE VARIANCE REPORT SHALL REMAIN WITH THE PART(S) UNTIL THE OPERATIONS ON THE SHEET ARE COMPLETED.

10.1.4 PRODUCTION ORDERS AND VARIANCE REPORTS SHALL NOT BE REMOVED FROM THE PART(S) OR ASSEMBLIES TO WHICH THEY APPLY UNTIL THE MATERIAL IS MOVED TO INVENTORY OR SHIPPED.

10.2 HANDLING, STORAGE, AND SHIPPING

10.2.1 ALL MATERIALS SHALL BE HANDLED USING APPROPRIATE LIFTING METHODS AND RIGGING EQUIPMENT TO MAINTAIN PART INTEGRITY. EXPERIENCED AND QUALIFIED PERSONNEL SHALL PERFORM REQUIRED MAINTENANCE ON HANDLING EQUIPMENT.

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10.2.2 PADS SHALL BE USED WHEN NECESSARY TO PROTECT CRITICAL MACHINED SURFACES SUCH AS SEALING SURFACES AND THREADS.

10.2.3 RIGGING EQUIPMENT SHALL BE PERIODICALLY EXAMINED BY COMPANY SUPERVISORY PERSONNEL FOR DEFECTS THAT WOULD CAUSE PERSONAL OR PRODUCT HARM.

10.2.4 EQUIPMENT SHALL BE STORED IN SUCH A MANNER AS TO PREVENT DAMAGE AND DETERIORATION. STORAGE SHALL BE IN A LIMITED ACCESS AREA TO PREVENT EXPOSURE TO CORROSIVE VAPORS AND COMPOUNDS. ITEMS WHICH HAVE LIMITED SHELF LIFE SHALL BE STORED AND MAINTAINED AS SPECIFIED BY MANUFACTURER'S INSTRUCTIONS.

10.2.5 ALL MATERIAL SHALL BE STORED AND HANDLED IN SUCH A MANNER AS TO PREVENT LOSS OF THE MATERIAL IDENTIFICATION.

10.2.6 PRIOR TO SHIPMENT, EQUIPMENT SHALL PACKAGED TO PREVENT DAMAGE. CUSTOMERS ARE TO ADVISE IF SPECIAL PACKAGING IS REQUIRED FOR SEA SHIPMENT TO PROTECT FROM ELEMENTS. IDENTITY SHALL BE MAINTAINED ON EACH ITEM AND EACH PACKAGE. CRITICAL MACHINED PARTS SHALL BE GUARDED WITH PROTECTIVE COVERS AND EXPOSED FINISHED SURFACES SHALL BE COATED WITH A RUST PREVENTIVE.

11.0 NON-CONFORMANCE CONTROL

11.1 CONTROL OF NON-CONFORMING MATERIAL

11.1.1 THIS SECTION APPLIES TO ALL MATERIALS THAT FAIL TO MEET SPECIFICATIONS. IT APPLIES TO MATERIALS IN **intMPE, Inc.**, RECEIVING AND PRODUCTION INSPECTION AREAS WHICH ARE FOUND TO BE UNSATISFACTORY.

11.1.2 MATERIAL THAT IS REJECTED FOR NON-CONFORMANCE TO SPECIFICATIONS SHALL BE SEGREGATED AND IDENTIFIED WITH A VARIANCE REPORT FORM AND LOGGED ON VARIANCE FILE. ITEMS WILL THEN BE RE-WORKED WITH EMERGENCY RE-START AUTHORIZATION (EXHIBIT 10) OR SCRAPPED.

11.1.3 THE **intMPE, Inc.**, MATERIAL REVIEW BOARD (MRB) SHALL CONSIST OF THE FOLLOWING OR THEIR RESPECTIVE DESIGNATE: QUALITY ASSURANCE MANAGER, (CHAIRMAN OF THE MRB), PRODUCT ENGINEERING MANAGER, PRODUCTION MANAGER AND OPERATION MANAGER.

11.1.4 THE MRB SHALL MEET WEEKLY TO DISCUSS FINANCIAL AND TIME CONSIDERATIONS.

11.1.5 THE MRB MAY NOT MAKE A DISPOSITION ON MATERIAL THAT WOULD VIOLATE ANSI OR API-610 REQUIREMENTS RELATED TO THE TYPE OF PART. WHEN MODIFICATIONS TO CUSTOMER SPECIFICATIONS THE CUSTOMER MUST BE NOTIFIED AND THE CUSTOMER'S APPROVAL MUST BE RECEIVED. ALL DECISIONS AND CUSTOMER APPROVAL SHALL BE

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DOCUMENTED ON A MRB DISPOSITION FORM (EXHIBIT 13) .

11.1.6 UPON COMPLETION AND ACCEPTANCE OF REWORK OPERATIONS, THE PRODUCTION ORDER SHALL BE FORWARDED TO THE PRODUCTION CONTROL DEPARTMENT FOR FILING.

11.2 QUALITY PROBLEMS CORRECTIVE ACTION

11.2.1 THE **intMPE, Inc.**, QUALITY ASSURANCE MANAGER, OR DESIGNATE SHALL BE RESPONSIBLE FOR CORRECTIVE ACTION AND MUST LOG PROBLEMS ON THE CORRECTIVE (EXHIBIT 15) ACTION REPORT FORM ON THOSE RECURRING CONDITIONS WHICH ARE ADVERSE TO QUALITY, AND INTRODUCE MEASURES TO AVOID THEIR REPETITION.

11.2.2 THE VARIANCE REPORTS SHALL BE ANALYZED PERIODICALLY TO DETECT RE-OCCURRING TYPES OF QUALITY PROBLEMS. DIRECTIVES SHALL BE ISSUED TO THE DEPARTMENT HEAD RESPONSIBLE FOR CORRECTION OF THE CONDITION.

12.0 QUALITY ASSURANCE RECORDS

12.1 QUALITY ASSURANCE RECORDS

12.1.1 IT SHALL BE THE RESPONSIBILITY OF THE **intMPE, Inc.**, QUALITY ASSURANCE MANAGER, OR DESIGNATE TO COLLECT DATA AND RECORD ESTABLISHING FILES FOR PRODUCT ORDERS REQUIRING TRACEABILITY.

12.1.2 FILES SHALL BE ESTABLISHED FOR EACH PRODUCTION/PURCHASE ORDER GENERATED BY THE CUSTOMER. THE FILES SHALL INCLUDE THE FOLLOWING INFORMATION:

CUSTOMER PURCHASE ORDER.

SALES ORDER.

SEI/QAS (AS APPLICABLE).

SPECIAL QUALITY ASSURANCE REQUIREMENTS.

PURCHASE ORDERS TO VENDORS.

VENDOR MATERIAL REPORTS MATERIAL CERT.

PRODUCTION ORDER/MANUFACTURING PROCEDURE ASSEMBLY DRAWINGS.

NDT REPORTS.

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HEAT TREAT CERTIFICATIONS.

COPIES OF DRAWINGS USED FOR PRODUCTION.

OTHER DOCUMENTATION AS REQUIRED.

12.1.3 DOCUMENTATION REQUIRED BY CUSTOMERS/END-USERS SHALL BE TRANSMITTED TO THE ADMINISTRATIVE SERVICES DEPARTMENT FOR FORWARDING TO THE CUSTOMER.

12.2. RECORD STORAGE

12.2.1 ALL **intMPE, Inc.**, FILES SHALL BE MAINTAINED TO PROTECT THEM FROM DAMAGE, DETERIORATION, AND LOSS. DOCUMENTATION SHALL BE LEGIBLE, IDENTIFIABLE, AND RETRIEVABLE, AND SHALL BE STORED FOR A MINIMUM PERIOD OF FIVE (5) YEARS. BACKUP SOFT AND HARD COPIES ARE KEPT.

13.0 QUALITY ASSURANCE AUDITS

13.1 INTERNAL AUDIT PROGRAM

13.1.1 IT SHALL BE THE RESPONSIBILITY OF THE **intMPE, Inc.**, QUALITY ASSURANCE MANAGER TO CONDUCT PLANNED AND PERIODIC AUDITS TO ASSURE COMPLIANCE WITH THE REQUIREMENTS OF THIS MANUAL AND TO ASSURE THE CONTINUING EFFECTIVENESS OF THE SYSTEM DESCRIBED HEREIN.

13.1.2 THE **intMPE, Inc.**, QUALITY ASSURANCE MANAGER SHALL COVER EACH OPERATING SECTION OF THIS MANUAL BIANNUALLY OR WHEN DEEMED NECESSARY AND PROVIDE FOR THE SCHEDULING OF THE RE-AUDITS AS NECESSARY. HE WILL ASSURE CORRECTIVE ACTION FOUND NECESSARY IS TAKEN AS A RESULT OF SUCH AUDITS. THE QUALITY ASSURANCE MANAGER OR DESIGNATE SHALL USE AS AUDIT CHECK LIST (EXHIBIT 14) AND FORWARD NECESSARY CHANGES TO THE APPLICABLE DEPARTMENT MANAGER.

14.0 PRODUCT FAILURE AND ANALYSIS

14.1 CUSTOMER/END-USER COMPLAINTS

14.1.1 ALL **intMPE, Inc.**, CUSTOMER/END-USER COMPLAINTS SHALL BE DOCUMENTED ON THE COMPLIANT FORM (EXHIBIT 09).

14.1.2 IT SHALL BE THE RESPONSIBILITY F THE PERSON TAKING THE COMPLAINT TO DOCUMENT IT.

14.1.3 THE CUSTOMER/END-USER COMPLAINT FORM CONTAINS THE FOLLOWING INFORMATION:

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CUSTOMER/END-USER NAME

CONTACT(S), PURCHASING/ENGINEERING/MAINTENANCE

intMPE, Inc., INVOICE NUMBER

PART NUMBER AND OR STOCK NUMBER

DESCRIPTION OF CUSTOMER/END-USER COMPLAINT

DATE INSPECTED

DATE SOLD

INSPECTOR

14.1.4 THE CUSTOMER/END-USER COMPLAINT FORM SHALL THEN BE FORWARDED TO THE SALES SUPERVISOR FOR PROCESSING.

14.2 CORRECTIVE ACTION

14.2.1 IT SHALL BE THE RESPONSIBILITY OF THE **intMPE, Inc.**, QUALITY ASSURANCE MANAGER TO DETERMINE THE DISPOSITION OF THE CUSTOMER/END-USER COMPLAINT.

14.2.2 THE QUALITY ASSURANCE MANAGER SHALL DETERMINE WHAT THE PROBLEM IS AND CONTACT THE CUSTOMER TO ACHIEVE A CONSENSUS OF OPINION.

14.2.3 IF THE PART IS RETURNED, THE QUALITY ASSURANCE MANAGER SHALL DETERMINE IF THE PART CAN BE REPAIRED OR SHOULD BE REPLACED.

14.2.4 A WARRANTY WORK ORDER SHALL BE STARTED TO TAKE THE CORRECTIVE ACTION RECOMMENDED BY THE **intMPE, Inc.**, QUALITY ASSURANCE MANAGER. THE PROCEDURE FOR HANDLING THE WARRANTY WORK ORDER SHALL BE THE SAME AS REGULAR CUSTOMER ORDERS WITH THE EXCEPTION THAT THE WORD "WARRANTY" MUST APPEAR ON THE WORK ORDER.

14.2.5 IF THE QUALITY ASSURANCE MANAGER DEEMS THE PROBLEM SERIOUS ENOUGH, THE CORRECTIVE ACTION REVIEW BOARD MAY BE CONSULTED FOR RECOMMENDATION OF CORRECTIVE ACTION.

14.2.6 IT SHALL BE THE RESPONSIBILITY OF THE QUALITY ASSURANCE MANAGER OR DESIGNATE TO DOCUMENT THE CORRECTIVE ACTION ON THE CUSTOMER COMPLAINT FORM AND ADVISE THE CUSTOMER THIS ACTION.

14.2.7 ONE COPY OF THE CUSTOMER COMPLAINT FORM SHALL BE RETAINED IN THE

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WARRANTY WORK ORDER FOLDER WHEN COMPLETED AND ONE COPY IN THE CUSTOMER FILE.

15.0 CORRECTIVE ACTION PROCEDURE

15.1 RESPONSIBILITY STATEMENT

15.1.1 **intMPE, Inc.**, ASSUMES FULL RESPONSIBILITY TO EXPEDITE THE REPLACEMENT OR REPAIR OF ANY PRODUCT PURCHASED OR MANUFACTURED AND DISTRIBUTED BY ITS NET-WORK OF WORLD WIDE CUSTOMERS/END-USERS. WE WILL DO ALL THAT IS IN OUR POWER TO ENSURE THAT OUR CUSTOMER/END-USER LOSS OF PRODUCT IS MINIMIZED.

15.1.2 THE MATTER TO REFUND FOR, OR INVOICING OF THE PART(S) IN QUESTION TO THE CUSTOMER/END-USER WILL BE DETERMINED AT A LATER DATE AFTER FULL REVIEW BY ALL INVOLVED TO DETERMINE CAUSE OF FAILURE.

15.2 VARIANCE CORRECTIVE ACTION PROCEDURE

15.2.1 IN THE CASE OF SINGLE VARIANCE REPORTS CORRECTIVE ACTION SHALL BE INITIATED BY THE **intMPE, Inc.**, QUALITY ASSURANCE MANAGER OR DESIGNATE TO REPAIR OR RE-START A PARTICULAR JOB. IF THE QUALITY ASSURANCE MANAGER CONSIDERS THE PARTS ON THE JOB TO BE REPAIRABLE, THE VARIANCE SHALL BE SENT WITH THE PARTS TO THE MACHINE SHOP SUPERVISOR OR THE APPROPRIATE BUYER THROUGH INSPECTION. IF THE PARTS MUST BE SCRAPPED, A COPY OF THE VARIANCE REPORT SHALL BE SENT TO THE PRODUCTION CONTROL DEPARTMENT WHO WILL INITIATE A JOB RE-START.

15.2.2 IF THE VARIANCE INVOLVES A RELATIVELY MINOR FLAW, A COPY OF THE VARIANCE MAY BE SENT TO THE SALES MANAGER TO DECIDE IF THE PART CAN BE SHIPPED AS IS OR IF ANY REPAIR WORK IS REQUIRED.

15.2.3 A COPY OF EACH VARIANCE SHALL BE FORWARDED TO THE PRODUCTION DEPARTMENT FOR REVIEW.

15.2.4 IF ANY EXCESSIVE NUMBER OF VARIANCES ARE CREATED BY A COMMON FACTOR, IT IS THE QUALITY ASSURANCE MANAGER'S RESPONSIBILITY TO CALL A CORRECTIVE ACTION REVIEW BOARD.

15.3 MATERIAL REVIEW BOARD

15.3.1 IT SHALL BE THE RESPONSIBILITY OF THE **intMPE, Inc.**, QA MANAGER TO CALL A MATERIAL REVIEW BOARD (MRB) MEETING AT SUCH TIMES AS CIRCUMSTANCES REQUIRE

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IT. IT SHALL BE THE QA MANAGER'S DUTY TO PRESENT THE ISSUE AT HAND TO THE BOARD FOR THEIR SOLUTION.

15.3.2 THE MRB'S DETERMINATION SHALL BE DOCUMENTED IN A MRB DISPOSITION FORM. THE QA MANAGER SHALL BE RESPONSIBLE TO SEE THAT THE ACTIONS DETERMINED BY THE MRB ARE FULFILLED.

15.3.3 IF AN EXCESSIVE NUMBER OF MRB'S ARE CREATED BY A COMMON FACTOR, IT IS THE QA MANAGER'S DUTY TO CALL A CORRECTIVE ACTION REVIEW BOARD (CARB).

15.3.4 THE QA MANAGER IS ALSO REQUIRED TO RETAIN A COPY OF THE MRB DISPOSITION FOR A RECORD OF CORRECTIVE ACTION TAKEN.

15.4 CUSTOMER/END-USER COMPLIANT

15.4.1 WHEN A CUSTOMER/END-USER COMPLIANT FORM IS RECEIVED FROM THE SALES MANAGER, THE **intMPE, Inc.**, QUALITY ASSURANCE MANAGER SHALL DETERMINE THE EXACT NATURE AND SERIOUSNESS OF THE PROBLEM.

15.4.2 THE DECISION TO REPAIR OR REPLACE THE PART IS THE RESPONSIBILITY OF THE QUALITY ASSURANCE MANAGER OR DESIGNATE.

15.4.3 IF NO DETERMINATION CAN BE MADE THE **intMPE, Inc.** QUALITY ASSURANCE MANAGER SHALL CALL A CARB MEETING TO MAKE THE FINAL DECISION.

15.4.4 IT IS THE QUALITY ASSURANCE MANAGER'S RESPONSIBILITY TO SEE THAT ALL CORRECTIVE MEASURES ARE COMPLETED..THE QUALITY ASSURANCE MANAGER SHALL RETAIN A COPY OF THE CUSTOMER COMPLIANT FORM TO DOCUMENT ALL CORRECTIVE ACTIONS TAKEN.

15.5 INTERNAL AUDIT

15.5.1 WHEN CORRECTIVE ACTION IS NEEDED THE QUALITY ASSURANCE MANAGER SHALL COMPILE THE INFORMATION FROM THE AUDIT ON A CORRECTIVE ACTION REPORT FORM AND PRESENT THE REPORT BEFORE THE CORRECTIVE ACTION REVIEW BOARD.

15.5.2 THE CORRECTIVE ACTION REVIEW BOARD SHALL BE RESPONSIBLE FOR DECIDING WHAT CORRECTIVE ACTIONS ARE REQUIRED TO ELIMINATE THE DISCREPANCIES FOUND DURING THE BI-ANNUAL AUDIT.

15.5.3 IT SHALL BE THE RESPONSIBILITY OF THE **intMPE, Inc.**, QA MANAGER TO SEE THAT THOSE CORRECTIVE ACTIONS ARE IMPLEMENTED.

15.5.4 IT SHALL BE THE QA MANAGER'S RESPONSIBILITY TO RETAIN FULL

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DOCUMENTATION OF THE CARB'S DETERMINATIONS, A COPY OF THE AUDIT CHECK LIST, AND CORRECTIVE ACTION REPORT.

15.6 VENDOR AUDIT

15.6.1 THE QA MANAGER SHALL AUDIT THE VENDOR'S USED BY THIS COMPANY THROUGH REVIEW OF VARIANCE REPORTS AND THROUGH PERIODIC MEETINGS WITH THE APPROPRIATE BUYERS AND DEPARTMENT HEADS.

15.6.2 IF ANY VENDOR IS FOUND TO CONSISTENTLY PROVIDE POOR QUALITY PARTS, THE **intMPE, Inc.**, QUALITY ASSURANCE MANAGER SHALL PREPARE A CORRECTIVE ACTION REPORT TO PRESENT BEFORE THE CARB. THE REPORT SHALL CONTAIN THE ASSESSMENT OF THE PROBLEM AND POSSIBLE SOLUTIONS.

15.6.3 IT SHALL BE THE RESPONSIBILITY OF THE QUALITY ASSURANCE MANAGER TO SEE THAT THE BOARD'S DETERMINATION IS EXECUTED.

15.6.4 THE QUALITY ASSURANCE MANAGER SHALL RETAIN A COPY OF THE CORRECTIVE ACTION REPORT AND A COPY OF THE BOARD'S DETERMINATION.

15.7 CORRECTIVE ACTION REVIEW BOARD

15.7.1 THE **intMPE, Inc.**, CORRECTIVE ACTION REVIEW BOARD (CARB) SHALL CONSIST OF THE QUALITY ASSURANCE MANAGER, THE PRODUCTION MANAGER, THE PRODUCTION ENGINEERING SUPERVISOR, AND THE OPERATION MANAGER.

15.7.2 THE PURPOSE OF THE CARB SHALL BE TO MAKE DECISIONS WHICH ELIMINATE PROBLEMS IN PRODUCT QUALITY OF DELIVERY AND TO RECTIFY ANY DISCREPANCIES BETWEEN STANDARD PROCEDURE AND THE QA MANUAL.

15.7.3 THE **intMPE, Inc.**, CARB SHALL MEET NO LESS THAN ONCE PER QUARTER.

15.7.4 THE OPERATION MANAGER SHALL BE THE CHAIRMAN OF THE CARB AND IS RESPONSIBLE TO CALL THE MEETINGS.

15.7.5 MEETINGS OF THE CARB MAY BE CALLED AT THE OPERATION MANAGER'S DISCRETION, WHENEVER HE CONSIDERS A PARTICULAR PROBLEM NEEDS THE BOARD'S ATTENTION.

15.7.6 THE ADMINISTRATIVE SERVICES MANAGER SHALL BE RESPONSIBLE FOR COMPILING THE ISSUES TO BE DISCUSSED ON A CORRECTIVE ACTION REPORT AND PRESENTING THE ISSUES TO THE BOARD.

15.7.7 IT SHALL BE THE RESPONSIBILITY OF THE BOARD MEMBERS TO IMPLEMENT THE

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CORRECTIVE ACTION WHICH IS DETERMINED BY THE CARB IN THEIR RESPECTIVE DEPARTMENTS.

15.7.8 IT SHALL BE THE DUTY OF THE QUALITY ASSURANCE MANAGER TO AUDIT THE VARIOUS DEPARTMENTS TO VERIFY THAT THE CORRECTIVE ACTIONS RECOMMENDED BY THE BOARD ARE EXECUTED.

15.7.9 THE **intMPE, Inc.**, QUALITY ASSURANCE MANAGER SHALL RETAIN A COPY OF THE CORRECTIVE ACTION REPORT FORM, FULL DOCUMENTATION OF THE DETERMINATION OF THE BOARD AND RECORDS OF THE DETERMINATION EXECUTION, AS APPLICABLE BY QUALITY ASSURANCE REQUIREMENTS.

APPENDIX

16.0 LIST OF ACRONYMS AND ABBREVIATIONS

16.1 AWS - AMERICAN WELDING SOCIETY

16.2 MRB - MATERIAL REVIEW BOARD

16.3 NDT - NON-DESTRUCTIVE TESTING

16.4 Q.A.- QUALITY ASSURANCE

16.5 QAP - QUALITY ASSURANCE PLAN

16.6 QAS - QUALITY ASSURANCE STANDARD OF PROCEDURE

16.7 Q.C.- QUALITY CONTROL

16.8 CARB- CORRECTIVE ACTION REVIEW BOARD

17.0 EXHIBITS

17.0 WORK SHEET, EXHIBIT A

17.1 JOB FOLDER FORM

17.2 INVENTORY SHEET

17.3 PRODUCTION ORDER/MANUFACTURING PROCEDURE

17.4 PURCHASE ORDER

17.5 **intMPE** IDENTIFICATION TAG

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17.6 VARIANCE REPORT

17.7 CALIBRATION SCHEDULE

17.8 GAGE RECORD CARD

17.9 CUSTOMER COMPLAINT FORM

17.10 EMERGENCY RESTART AUTHORIZATION

17.11 DRAWING REVISION REQUEST

17.12 PATTERN RECORD CARD

17.13 MRB DISPOSITION FORM

17.14 AUDIT CHECKLIST

17.15 CORRECTIVE ACTION REPORT FORM

17.16 TRAINING PROGRAM LOG