

Presentation

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**“QUALITY PROGRAMS AND SAFETY
ASSURANCE FOR THE PETROLEUM,
PETROCHEMICAL AND NATURAL GAS
INDUSTRIES.”**

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The QMS and Barriers to Trade



- **THE CONVENTIONAL QMS AND ITS REGISTRATION (THE QMS CERTIFICATION) IN MANY RESPECTS HAVE BECOME THE ADMINISTRATIVE BARRIERS ON A PRODUCT'S WAY TO THE CUSTOMER AND CEASED TO FUNCTION AS TECHNICAL BARRIERS – AS INITIALLY DESIGNED FOR CONTROLLING THE TECHNICAL RISKS AND THE PRODUCT SAFETY.**

The QMS and the Product Safety



- **THE CONNECTION BETWEEN THE QMS (ITS CERTIFICATION) AND THE PRODUCT SAFETY HAS BEEN BROKEN.**

NEGATIVE CONSEQUENCES OF THIS – MANY ACCIDENTS (INCLUDING LARGE SCALE) WITH INDUSTRIAL PRODUCTS.

The QMS and Industrial Facilities



- **IT IS A KNOWN PRACTICE WHEN INDUSTRIAL FACILITIES (BUILDINGS AND STRUCTURES, INCLUDING OFFSHORE STRUCTURES WITH WELLS, AND OTHER FACILITIES) ARE MANUFACTURED, CONSTRUCTED AND OPERATED WITHOUT THE QUALITY PROGRAM.**

A Lack of the Quality Program



- **A LACK OF THE QUALITY PROGRAM FOR THE INDUSTRIAL FACILITY IN MANY CASES MEANS THE LACK OF A PROPER CONTROL OVER THE TECHNICAL RISKS AND THE SAFETY OF THE FACILITY DURING ITS DESIGN, CONSTRUCTION AND OPERATION.**

A Loss of the Control over Technical Risks and the Safety



- **AN EXAMPLE – THE ACCIDENT WITH “DEEPWATER HORIZON” DRILLING PLATFORM DURING THE CONSTRUCTION OF THE “MACONDO” WELL IN THE GULF OF MEXICO, AND THE FAILURE OF THE BLOWOUT PREVENTER TO SEAL OFF THE WELL.**

A Loss of the QMS Fundamentals



- **THE QMS TECHNICAL, LEGAL AND ECONOMIC FUNDAMENTALS DESIGNATED TO DECREASE TECHNICAL RISKS AND ENHANCE PRODUCT SAFETY HAVE BEEN ERODED AND LOST DURING THE LAST 10 YEARS.**

A Loss of the QMS Fundamentals *(continued)*



- **THE EROSION AND LOSS OF THE QMS FUNDAMENTALS RELATED TO THE SAFETY OF THE PRODUCT, HAS OCCURRED AT ALL LEVELS OF CONFORMITY ASSESSMENT ACTIVITIES: AT THE LEVEL OF “AN APPLICATION OF QMS STANDARDS IN THE ORGANIZATION,” AT THE LEVEL OF “THE REGISTRATION (CERTIFICATION) OF THE ORGANIZATION’S QMS” AND AT THE LEVEL OF “THE ACCREDITATION OF THE QMS REGISTRARS.”**

Restoring the QMS Fundamentals



- **THE QMS FUNDAMENTALS DESIGNATED TO DECREASE TECHNICAL RISKS AND TO ENHANCE PRODUCT SAFETY SHOULD BE RESTORED AND RETURNED TO THE THEORY AND PRACTICE OF AN ASSESSMENT OF CONFORMITY AND TO QMS STANDARDS' APPLICATION IN INDUSTRIES.**

THIS IS ONE OF THE OBJECTIVES OF A NEW QMS APPROACH.

A New QMS Approach



- **A NEW QMS APPROACH SHOULD BE APPLIED IN OPERATING ORGANIZATIONS AND SUPPLY CHAIN'S ORGANIZATIONS IN ORDER TO ENHANCE THE PRODUCT SAFETY.**

The QMS and the Freedom from Unacceptable Risks



- **THE PRODUCT SAFETY AS THE FREEDOM FROM UNACCEPTABLE RISKS SHOULD BE CONSIDERED THE # 1 QUALITY OBJECTIVE OF A NEW QMS APPROACH IN ORGANIZATIONS OF THE PETROLEUM, PETROCHEMICAL AND NATURAL GAS INDUSTRIES.**

The QMS and National Technical Borders



- **THE COMPANIES, PEOPLE AND THE ENVIRONMENT SHOULD BE PROTECTED FROM THE INDUSTRIAL PRODUCTS WITH UNACCEPTABLE TECHNICAL RISKS.**
- **REGULATORS OF THE NATIONAL TECHNICAL BORDERS IN THE COUNTRIES – MEMBERS OF THE WTO SHOULD DEVELOP GUIDELINES ON THE QMS APPLICATION IN PRODUCT-SUPPLIES ORGANIZATIONS AND QMS REGISTRATION (CERTIFICATION) IN ORDER TO ENHANCE THE PRODUCT SAFETY.**

The QMS Basic Requirements



- **REQUIREMENTS FOR THE ORGANIZATION'S MANAGEMENT SYSTEM DESIGNATED TO MANAGE AND CONTROL THE DEGREE, TO WHICH A SET OF INHERENT CHARACTERISTICS OF THE PRODUCT AND RELATED TO THE PRODUCT PROCESSES MEET THE REQUIREMENTS OF THE ORGANIZATION, CUSTOMERS, AND OTHER STAKEHOLDERS, INCLUDING THE REGULATORS.**

The QMS and Regulatory Requirements



- **THE SOCIETY (PUBLIC), REPRESENTED BY ITS NATIONAL REGULATORS, ESTABLISHES THE REQUIREMENTS FOR THE PRODUCT AND BECOMES ONE OF THE MAIN CUSTOMERS OF THE PRODUCT SAFETY.**

ALL REGULATORY REQUIREMENTS FOR THE PRODUCT ON ALL THE STAGES OF THE PRODUCT LIFE CYCLE SHOULD BE INCLUDED INTO THE QMS OF THE ORGANIZATION.

Terms and Definitions in a New QMS Approach



THE TERMS AND DEFINITIONS, USED IN A NEW QMS APPROACH, ARE CONNECTED TO THE TERMS AND DEFINITIONS OF:

- THE TBT AGREEMENT AND THE STANDARDS ISO 9000 AND ISO/IEC 17000.**
- TECHNICAL REGULATIONS, RELATED TO THE PRODUCT.**
- APPLICABLE STANDARDS FOR THE PRODUCT.**



The QMS Standard and Product Safety

- **THE QMS STANDARD ADOPTED BY THE ORGANIZATION IS THE MAIN TECHNICAL AND LEGAL DOCUMENT OF THE ORGANIZATION, WHICH REGULATES THE PRODUCT SAFETY ASSURANCE AND PROCESSES RELATED TO THE PRODUCT SAFETY IN THE ORGANIZATION.**

The QMS's Processes: Management and Control



- **THE PROCESS OF MANAGEMENT AND THE PROCESS OF CONTROL IN THE FRAME OF THE ORGANIZATION'S QMS ARE CONSIDERED AS SEPARATE PROCESS WITH DIFFERENT REQUIREMENTS FOR THE EACH OF THEM.**

The QMS's Processes and the Product Safety



- **THE QMS DETERMINES THE CONNECTION BETWEEN INPUTS AND OUTPUTS OF MANAGING AND CONTROLLING PROCESSES IN THE ORGANIZATION AND INDICATORS OF THE PRODUCT SAFETY.**



The QMS's Processes and the Assessment of Product Conformity

- **THE REQUIREMENTS FOR THE CONTROL IN THE QMS OF THE ORGANIZATION INCLUDE THE REGULATIVE REQUIREMENTS FOR THE ASSESSMENT OF PRODUCT CONFORMITY ESTABLISHED IN THE TECHNICAL REGULATIONS.**

The QMS and the Quality Objectives



- **THE QUALITY OBJECTIVES ARE ESTABLISHED AS MEASURABLE PERFORMANCE TARGETS WITH PERFORMANCE INDICATORS AT DIFFERENT LEVELS OF THE MANAGEMENT AND CONTROL IN THE ORGANIZATION.**

The QMS's Performance Targets and the Product Safety



- **THE QMS PERFORMANCE TARGETS WITH PERFORMANCE INDICATORS ARE ESTABLISHED, TAKING INTO ACCOUNT RISKS AND PRODUCT SAFETY REQUIREMENTS ON THE STAGES OF THE PRODUCT LIFE CYCLE, INCLUDING THE FINAL USE OF THE PRODUCT.**

The QMS Records and the Benefit-Cost Analysis



- **THE QMS RECORDS INCLUDE RECORDS OF THE BENEFIT-COST (COST-EFFICIENCY) ANALYSIS.**

The QMS Records and the Benefit-Cost Analysis *(continued)*



- **THE BENEFIT-COST (COST-EFFICIENCY) ANALYSIS IS USED TO CHOOSE HOW THE ORGANIZATION IS PLANNING TO ACHIEVE THE PERFORMANCE TARGETS.**

The QMS Records' Book



- **THE QMS RECORDS' BOOK IS BEING CREATED TO COLLECT AND MAINTAIN DIFFERENT QMS RECORDS IN THE ORGANIZATION.**

The QMS Records' Book and the Product Safety



- **THE QMS RECORDS' BOOK IS BEING USED FOR THE MANAGEMENT AND CONTROL OF THE PRODUCT SAFETY AND RELATED TO THE PRODUCT SAFETY PROCESSES DURING THE PRODUCT REALIZATION.**

Requirements for the QMS Records' Book



**ORGANIZATION, TAKING INTO ACCOUNT
APPLICABLE NORMATIVE DOCUMENTS,
DETERMINES :**

- **THE CONTENT OF THE QMS RECORDS' BOOK.**
- **THE “LANGUAGE” AND THE PLAN OF THE QMS RECORDS.**
- **RIGHTS AND DUTIES OF PERSONS (AUTHORITIES) FOR THE QMS RECORDS KEEPING.**

The Structure of the QMS Records' Book



THE QMS RECORDS' BOOK CONSISTS OF:

- **THE QUALITY MANUAL.**
- **THE QMS PERFORMANCE REGISTER.**

The Quality Manual



THE QUALITY MANUAL SPECIFIES:

- **MEASURABLE PERFORMANCE TARGETS WITH PERFORMANCE INDICATORS, RELATED TO THE ORGANIZATION'S PRODUCT, INCLUDING TARGETS AND INDICATORS FOR THE PRODUCT SAFETY.**
- **PROCEDURES AND INSTRUCTIONS BY WHICH THE ORGANIZATION IS PLANNING TO ACHIEVE THE PERFORMANCE TARGETS AND TO CONTROL THIS (THROUGH ACCEPTANCE CRITERIA).**

The QMS Performance Register



- **THE QMS PERFORMANCE REGISTER CONTAINS INFORMATION ABOUT THE ACTIVITIES THAT WERE DONE AND RECORDS OF THE RESULTS ACHIEVED (PERFORMANCE INDICATORS).**



A Managing of the QMS Records' Book

- **THE QMS RECORDS' BOOK IS CONTROLLED AND MANAGED IN THE ORGANIZATION IN A CENTRALIZED MANNER.**

The Confidential Information in the QMS Records' Book



- **THE QMS RECORDS' BOOK
CONTAINS DOCUMENTS OF THE
STRICT ACCOUNTABILITY AND THE
CONFIDENTIAL INFORMATION OF THE
ORGANIZATION.**

The QMS Records “Language”



- **THE INTERNATIONAL SPECIALIZED LANGUAGE (TERMS AND DEFINITIONS, RULES) FOR TECHNICAL CONTROL AND MANAGEMENT IN THE ORGANIZATION ON THE BASIS OF THE QMS RECORDING IS UNDER DEVELOPMENT.**

Requirements for the QMS Records



- **THE QMS RECORDS DEPEND UPON THE NATURE AND COMPLEXITY OF THE PRODUCT, THE VOLUME AND THE TYPE OF REQUIREMENTS FOR THE PRODUCT AND RELATED TO PRODUCT PROCESSES.**

Requirements for the QMS Records *(continued)*



- **THE QMS RECORDS ARE REGULATED BY CONFORMITY ASSESSMENTS' AND QUALITY STANDARDS, PRODUCT STANDARDS, AND OTHER NORMATIVE DOCUMENTS FOR PRODUCT SAFETY.**

The QMS Records Keeping



- **THE TIMING OF PERFORMING AND STORING OF THE QMS RECORDS, RIGHTS AND DUTIES FOR QMS RECORDS KEEPING, SHOULD BE DETERMINED IN THE QUALITY MANUAL, TAKING INTO ACCOUNT APPLICABLE NORMATIVE REQUIREMENTS.**

The QMS Records Keeping *(continued)*



- **THE QMS RECORDS ARE PERFORMED IN REAL TIME IN THE ACCUMULATING MANNER.**

Plan of the QMS Records and the Product Safety



- **THE PLAN OF THE QMS RECORDS SHOULD BE DEVELOPED TO SPECIFY THE PERFORMANCE TARGETS (PERFORMANCE INDICATORS) TO ACCOUNT THE RESULTS OF EVENTS AFFECTING THE SAFETY OF THE PRODUCT.**

The QMS Effectiveness/Efficiency and the Product Safety



IN THE FRAME OF A NEW QMS APPROACH:

- THE QMS'S EFFECTIVENESS DEPENDS UPON THE PRODUCT SAFETY INDICATORS.**
- THE QMS'S EFFICIENCY DEPENDS UPON THE ENERGY EFFICIENCY AND ENERGY CONSERVATION INDICATORS.**

The QMS Information About the Product Safety



- **THE FULL OBJECTIVE INFORMATION CAN BE AVAILABLE IN THE SHORTEST TIME TO ASSESS THE FREEDOM FROM UNACCEPTABLE RISKS, AND TO FIND PROPER SOLUTIONS IN THE FIELD OF PRODUCT SAFETY ASSURANCE.**

The QMS and the Product Safety Substantiating



- **BY USING THE QMS RECORDS ONE CAN QUICKLY AND COST EFFECTIVELY PREPARE THE REPORTS FOR SUBSTANTIATING THE PRODUCT SAFETY, ENERGY EFFICIENCY AND ENERGY CONSERVATION AND ETC., IN ORDER TO OBTAIN VARIOUS PERMITS, LICENSES, CERTIFICATES AND APPROVALS OF REGULATORS AND THE CUSTOMERS.**

The QMS and the Product Safety Examination (Audit)



- **THE EFFICIENCY AND EFFECTIVENESS OF THE PRODUCT SAFETY EXAMINATION (CONDUCTED BY THE 1-ST, 2-ND, 3-RD PARTIES) WILL INCREASE USING THE QMS RECORDS.**

ANY NONCONFORMITY, RELATED TO THE PRODUCT SAFETY WILL BE DETECTED MORE EFFECTIVELY.

The QMS and the Accidents' and Incidents' Investigations



- **INVESTIGATION OF ACCIDENTS AND INCIDENTS BECOMES EASIER WHEN USING THE FULL AND COMPREHENSIVE QMS RECORDS' INFORMATION ABOUT THE EVENTS AFFECTING THE PRODUCT SAFETY.**

The QMS and the Improvement of Technical Regulations (Norms and Rules)



- **A NEW QMS APPROACH FACILITATES FINDING AND ELIMINATING OF AMBIGUOUS, ECONOMICALLY UNJUSTIFIED AND INNEFFECTIVE REGULATORY REQUIREMENTS TO THE PRODUCT.**



**THANK YOU
FOR YOUR
ATTENTION!**