#### **Personal Statistics:**

Erik Asp Sørensen Citizenship: Danish

Date of Birth: 12 April 1967

# Language Capabilities:

Danish Native English Good German Medium



#### **Education:**

Specialist in Compliance Assessment, Engineering and Inspection (Value based), with expertise in conducting verification reviews against legislative regulations, EU Directives, and recognized standards (including CE compliance, ATEX, MD, PED, and LVD). Core competencies lie in the Oil & Gas and Power2X industries (focused on hydrogen generation, compression, and storage).

Certified as a specialist and Competent Person in both electrical and non-electrical equipment and assemblies for hazardous areas (ATEX/IECEx). CompEx-certified Application Design Engineer / Ex Inspector with extensive experience in installation, inspection, and maintenance of equipment for safe use in hazardous environments.

#### Career:

#### 2017 – Present: Principal Engineer, DNV (Multi-Discipline)

Specialized in Certification, Verification, Inspection, and QA/QC Project Engineering, with experience across various industries, including Power2X and Oil & Gas projects.

#### **Power2X Projects:**

- Zeevonk / CIP Electrolyzer CE Compliance audit in China (PED, ATEX)
- GreenH Electrolyzer unit specification support & mapping of EU Directives.
- FlagshipOne, eMethanol plant (Ørsted AS). Served as the Electrical, Instrumentation, and ATEX Verification Lead.
- Conducted compliance audits at Everfuel's HySynergy H2 production, compression, and storage facility.
- Compliance audits for CIP, covering two Chinese-based manufacturers of hydrogen electrolyzer units.
- Contributed to knowledge and competence sharing at DNV Energy in Esbjerg, Denmark.

#### Oil & Gas Projects:

- Hejre Development Projetc (Select Phase). Acting as the Electrical, Instrumentation, and ATEX Verification Lead.
- Tyra Future Redevelopment Project Offshore Oil & Gas process and accommodation facilities. Served as Electrical, Instrumentation, and ATEX Lead in Batam, Indonesia, for 18 months during construction and mechanical completion. Also participated in offshore hook-up and commissioning in the Danish sector.
- Culzean Development Project Worked on Oil & Gas process facilities.
- In-Service Verification, Inspection, and Audits for all TotalEnergies offshore locations in Denmark.

Primary areas of expertise include verification & Inspection of Electrical, Instrumentation, ESD, Fire & Gas systems, Rotating Equipment, Turbines, Power Generation, Gas Compression, Emergency Power, Fire Water systems, Lifting Equipment, and Electrical/Non-electrical equipment and assemblies in hazardous areas (ATEX/IECEx), as well as machinery and pressurized equipment (assemblies).

#### 2016 – Present: Consultancy - Senior Electrical Engineer (Freelance)

Provided expertise through Asp Consult, offering manpower solutions in the areas of Verification, QA/QC, and Inspection, with multi-disciplinary competencies.

#### 2016 - 02.2017: Offshore Verification Engineer, Bureau Veritas

Specialized in Certification, Verification, and Inspection (QA/QC) of offshore topside installations and equipment.

#### Oil & Gas Projects:

• In-Service Verification, Inspection, and Audits for Hess at the South Arne offshore location in Denmark.

Key areas of focus include Electrical Systems, Instrumentation (SIS), Fire & Gas systems, ESD systems (including software tests), Fire Water systems, Escape Routes and Equipment, PAGA, Emergency Power and Lighting, ATEX, Machinery (Rotating) Equipment, and Life-Saving Equipment, including Davits.

# 2012 - 05.2016: Technical Authority Electrical & Instrumentation, DONG Energy E&P

Over 4 years of experience at DONG Energy E&P as Technical Authority for Electrical & Instrumentation (E&I), supporting the RFO team for the Hejre Platform. Responsibilities included ensuring technical integrity across key areas such as Electrical Systems, Instrumentation, Fire & Gas systems, ATEX (both electrical and non-electrical), Machinery, and Functional Safety (EN 61508/61511). Also oversaw the safe operation of machinery, including lifting appliances. Contributed to the development of Performance Standards and Verification Schemes in line with European offshore legislation.

#### 2007 – 2012: E&I Surveyor/Verification Engineer, DNV GL

Over 4 years of experience at DNV Energy as a Surveyor/Inspector, specializing in Certification, Verification, Inspection, and QA/QC Project Engineering, primarily for offshore topside facilities. Key areas of expertise include Electrical Systems, Instrumentation, ESD, Fire & Gas, Software Validation, Emergency Power, PAGA, Fire Water, ATEX, and Machinery Equipment. Also involved in the verification of Safety strategies/ Philosophies, Functional Specifications across multiple disciplines, and the verification of FEED studies.

# 2004 – 2007: Electrical Inspector, Danish Safety technology Authority (Sikkerhedsstyrelsen)

4 years of experience at the Danish Safety Technology Authority (Sikkerhedsstyrelsen) as an Inspector/Advisor. Primary responsibilities included conducting inspections related to heavy current regulations, the Machinery Directive, the ATEX Directive, and associated standards harmonized under various EU directives.

#### 2000 – 2004: Team Lead, Service and Projects, Lindpro A&S (Electrical Contractor)

4 years of experience as Team Lead at Lindpro AS, primarily focused on technical services and project management for mid size projects.

# 2000 – 2000: Commissioning Engineer, Powerplants, BWSC

Completed a 1-year contract as a Commissioning Engineer at Burmeister Wain Scandinavian Contractor. Responsibilities included commissioning diesel engine power plants in Sri Lanka, the Maldives, and the Cayman Islands, while simultaneously training local staff to operate the plants.

# **Professional Training**

2024 IECEx/ATEX Preparation, Installation, Maintenance & Inspection of EX equipment

CompEx Ex01-04 - Certificate Number XXXX (Expected late October - Valid to October

2029)

2024: IECEx/ATEX Design Application Engineer CompEx Ex12A & B – Certificate Number

129501 (Valid to 12 June 2029)

2024: OPITO Further Offshore Emergency Training with CA-EBS (helicopter Evacuation

Training)

2020-2024: Various online courses in Cyber Security Awareness Training.

2023: Passed DNV / Trainor Online IECEx / ATEX Course Non-Electrical Equipment (&

Assemblies)

2023: Passed DNV / Trainor Online IECEx / ATEX Course Electrical Equipment.

2019-2023: Various Safety Training for working on McDermott Ship Yard, Batam.

2019: ATEX and IECEx Non-Electrical for Design and Maintenance Personnel, Ex h Non-

Electrical Designers Course.

2018: IECEX/ATEX Preparation, Installation, Maintenance & Inspection of EX equipment

CompEx Ex01-04 - Certificate 64837

2016: Various courses obtain from Bureau Veritas, mainly within Safety, Code of Ethic,

Inspection Etc.

2016: Various GWO courses, e.g. sea survival (Wind)

2016:	Qualified Inspector at Bureau Veritas
2016:	Offshore Emergency Training including EBS, incl. Norwegian territory (FOET)
2016:	Compressed Air Emergency Breathing System Initial Deployment Training
2015:	IECEx/ATEX Design Application Engineer CompEx Ex12 – Certificate 00469ADE
2015:	Functional Safety Engineer (TÜV Rheinland) – Certificate no. 11206/15
2015:	Layer of Protection Analysis – 1-day course
2015:	EU Requirements to machinery manufacturers, importers and distributors. (DI seminar)
2015:	2006/42/EU Machinery Directive (Maskinsikkerhed.dk)
2014:	Gas Conditioning and Processing - G-4 - John M. Campbell
2012:	Basic Safety Training incl. HUET, certificate valid until February 2020
2011:	Risk Assessment & Hazardous Area Classification - 2-day course. (Baseefa Certified)
2011:	Safe Use of Electricity in Potentially Explosive Environments – (Baseefa Certified)
2011:	ISO 9001 Quality Management Systems Auditor/Lead Auditor - FORCE Technology -
	Certificate no. fdla263-05A
2010:	Layers of Protection Analysis (LOPA) - 1-day course.
2010:	DwD – Dealing with Dilemmas (DNV) 2010: Basic safety and health (DNV)
2009:	IEC 61892 series, Mobile and fixed offshore units - Electrical installations, incl.
	Norwegian Legislation - 4-day course. (Trainor AS)
2008:	Project Management 1 (DNV)
2008:	Ex authorization cabinet construction - 3-day course. (Trainor AS)
2008:	Risk Management Introduction (DNV)
2008:	Project Manager 0 (DNV)

# **Summary of Professional Experience:**

With over 20 years of proven experience in international projects, I have progressed from hands-on craftsmanship and test/commissioning engineering to project management and, currently, project verification as a Verification & Inspection Engineer (Value based Inspection). My most recent projects are in Power2X and Oil and Gas sector, while my previous experience spans power plants and advanced machinery for paper presses, among other areas. I have gained valuable experience working as a contractor, manufacturer, government authority, Verification Surveyor (DNV), and Technical Authority in the E&P business.

I possess multi-disciplinary expertise in areas such as Electrical Systems, Instrumentation, ESD, Fire & Gas detection, Functional Safety, Ignition Source Control, Software Validation, Rotating Equipment, Gas Turbines, Power Generation, Gas Compression, Fire Water systems, Lifting Equipment, Emergency Power, Evacuation and Escape, Lifesaving Appliances (SOLAS), Practical Technical Safety, ATEX, Machinery Safety, PED, and Value Based QA/QC.

My contributions include participation in Bow Tie analyses, Layers of Protection Analyses, identification of Safety Critical Elements, and the establishment of Performance Standards, including Verification Schemes (IECEx/ATEX). I have experience in Area Classification (Explosion Safety Document), design and installation of electrical and non-electrical equipment, inspection and maintenance, as well as risk assessments, compliance documentation, and CE marking.

# **Certificates of Personal Competencies:**

- CompEx Ex01-04 Ex (ATEX/IECEx) Installation, Inspection and Maintenance # XXXXX
- CompEx Ex12A&B Ex (ATEX & IECEx) Application Design Engineer # 129501 (valid to 12. June 2029)
- Baseefa Certified within Safe Use of Electricity in Potentially Explosive Environments # 11/0372/6 - Baseefa Certified within Risk Assessment & Hazardous Area Classification.
- Functional Safety Engineer (TÜV Rheinland) # 11206/15 (Obsolete)
- Gas Conditioning and Processing PetroSkills Sep. 2014 (John M, Campbell)
- Quality Management Systems ISO 9001 # fdla263-0
- Layers of Protection Analysis (LOPA) 2010 & 2014
- IEC 61892 series, Mobile and fixed offshore units, Electrical, incl. Norwegian Legislation (Trainer)
- Ex authorization cabinet construction (Trainor)
- Authorized Electrical Contractor, by the Danish Safety Technology Authority. Certificate no. 2-6020

# **Supplier / manufacturer Verification / Inspection job references:**

(Only major and recent Verification & Inspection references added)

# Copenhagen Infrastructur Partners (CIP), Power2X - Hydrogen Electrolyze units (Shanghai, China)

• Site Audit, EU Legislation and EU Directive compliance for complete electrolyzer units (H2 generator Stacks, separation and purification)

# Ørsted A/S, FlagshipOne, Power2eMethanol - Hydrogen generation, compression and eMethanaol production.

- Hydrogen Buffer Tank, (Eisenbau & Siemens Energy, Germany)
- Hydrogen Electrolyzer units (Siemens Energy, Czech Republic)
- Electrical heaters, (Topsoe & Ex Heat, England)

#### Everfuel, (HySynergy) Power2X - Hydrogen generation, compression and storage

 Site Audit, Legislation and EU Directive compliance for Electrical, Instrumentation, Machinery and ATEX

#### Total E&P Tyra Redevelopment Project - Oil & Gas

- Tyra Process Module TEG (McDermott, Batam Yard, Indonesia)
- Gas Turbine Generators (Baker Hughes, Italy)
- Gas Compressors (Baker Hughes, Italy & France)
- Firewater Pumps (FRAMO AS, Norway)
- Emergency Generators (FRAMO AS, Norway)
- Lifting Appliances Crane (Sormec, Italy)
- Rotating Equipment and Pumps (Sulzer, LeWa, Milton Roy, etc.)
- HV Distribution Panels (ABB, Czech Republic)
- Air Compressors (Atlas Copco, Belgium, UAE)
- Helicopter Refueling Skid (Sypack, Holland)
- Nitrogen Generator Skid (Hadetec, Holland)
- Electrical Process Heaters (ExHeat & Chromalox, England)

#### Total E&P Culzean - Oil & Gas

(Formerly Maersk Oil & Gas, DK, UK, and Qatar)

- Firewater Pumps (FRAMO AS, Norway)
- Emergency Generators (FRAMO AS, Norway)
- Gas Turbines for Power and Gas Compression (Siemens, Hengelo, NL)
- UPS Systems (Gutor, Switzerland)
- Distribution Panels/Switchboards (ABB, Semco, BarTec, Stahl, etc.)
- Control Panels, ESD, SCADA & UCPs (Siemens, ABB)
- Lifting Appliances, including systems for personnel lifting (Electrical & Instrumentation)
- Rotating Equipment and Pumps (Sulzer, LeWa, Milton Roy, etc.)
- Software Testing (ESD) (Siemens, ABB, ICS Triplex & Yokogawa)
- Fire & Gas Systems (Detectors & Control Systems)
- Public Address/General Alarm System (SemSound Bosch)
- Well Service Equipment

#### DONG Energy E&P - Oil & Gas

- UPS Systems (Emerson & Schneider Electric)
- Distribution Panels/Switchboards (Semco, ABB, & Emerson)
- Control Panels, ESD, SCADA & UCPs (Siemens, ABB)
- Lifting Appliances, including systems for personnel lifting (Electrical & Instrumentation) (Norsafe)
- Emergency Generators (MTU)
- Fire Pumps (Frank Mohn)
- Turbine Generators (Enclosed Equipment) (MAN Turbo & Diesel)
- Software Testing (ESD) (Siemens)
- Fire & Gas Systems (Detectors & Control Systems)
- Public Address/General Alarm System (SemSound & Neumann, Germany)