

ABASALIH ABDELRAHMAN

AUTOMATION & MANUFACTURING ENGINEERING LEADER

Industrial Robotics | Robotic Welding | Maintenance Leadership | Operational Excellence

Saudi Arabia | +966 53 915 6142 | baggary@hotmail.co.uk

PROFESSIONAL PROFILE

Automation and Manufacturing Engineering leader with more than 20 years of international experience across Saudi Arabia, the United Kingdom and Europe. Combines deep welding-engineering expertise with practical industrial robotics, manufacturing improvement and maintenance leadership. Experienced in developing and commissioning robotic welding cells, leading FAT/SAT and equipment acceptance, evaluating suppliers and capital investments, and translating production challenges into safe, reliable and commercially justified engineering solutions. Strong cross-functional record across production, quality, maintenance, planning, supply chain and vendor management.

CORE EXPERTISE

Automation Strategy & Roadmaps	ABB / FANUC / KUKA Robotics	Robotic Welding & Cell Integration	Maintenance & Reliability Management
FAT, SAT & Commissioning	Automation Feasibility & ROI	WPS / PQR / WPQ	Vendor & Supplier Evaluation
Lean Manufacturing & CI	Fixtures, Tooling & Cell Layout	Weld Quality & Defect Reduction	HSE, Risk & Compliance

PROFESSIONAL EXPERIENCE

KEKSA | Saudi Arabia

May 2026 - Present

Director of Automation

- Lead automation strategy across KEKSA 1 and KEKSA 2, prioritising opportunities in robotic welding, material handling, production support and factory modernisation.
- Manage the maintenance function, including preventive and corrective maintenance planning, breakdown reduction, equipment reliability, contractor coordination and follow-up of critical utilities and production assets.
- Develop technical feasibility studies and ROI models for automation investments, including robotic welding cells, fixtures, positioners, vision systems and supporting equipment.
- Lead technical supplier evaluations, commercial alignment and international technology due diligence, including factory visits and assessment of robotic welding solutions in China.
- Oversee FAT, SAT, commissioning, technical acceptance and production ramp-up for new equipment, modifications and facility-improvement projects.
- Coordinate Production, Engineering, Quality, Maintenance, Planning and Supply Chain to improve equipment availability, throughput, quality and delivery performance.
- Drive continuous improvement through standardised reporting, maintenance KPIs, welding jigs, process controls, critical-spares planning and data-based decision making.

Toggle Robotics - NEOM | Saudi Arabia

2023 - April 2026

Development and Planning Manager

- Operated, programmed and optimised a robotic welding demonstrator comprising one ABB IRB 6700 handling robot, two ABB IRB 4600 welding robots, Lincoln Electric power sources and RLS laser seam-finding technology.
- Led robotic welding demonstrations, proof-of-concept trials and technical presentations for NEOM stakeholders, clients and visitors.
- Supported commissioning, troubleshooting, FAT/SAT and process validation to improve weld consistency, repeatability and cycle time.
- Coordinated robot interaction, automated loading, pneumatic gripping, force-controlled placement, laser scanning and welding-sequence execution within a robot-centric architecture.
- Selected, tested and validated welding equipment, torches, peripherals, consumables and process parameters against project requirements.
- Led a cross-functional, software-driven workflow improvement that reduced material-handling time by 25% and improved operational efficiency.

Welding Process Engineer

- Supported FANUC robotic welding systems producing components for automotive and heavy-equipment customers, including Nissan and Caterpillar.
- Modified robot paths and welding parameters, resolved process issues and improved weld quality, consistency and production performance.
- Developed Standard Operating Procedures, welding maps and process controls for welding and brazing operations.
- Performed destructive and metallographic validation, including sectioning, etching and microscopic examination of welded and brazed joints.
- Worked with Engineering, Production, Quality and HSE teams on process re-engineering, defect reduction, cost control and continuous improvement.
- Evaluated emerging automation and robotic welding technologies to support manufacturing improvement.

Niftylift Ltd | Barnsley, United Kingdom

2018 - 2019

Production / Welding Engineer

- Supported structural-steel fabrication and ABB robotic welding production for access-platform manufacturing.
- Managed engineering-drawing control, revisions and shop-floor implementation.
- Developed welding techniques, procedures and equipment applications, and maintained welder qualification/prolongation in accordance with ASME and EN ISO requirements.
- Improved robotic production-line cycle time by 15% through the introduction of a redesigned clamping system.
- Prepared welding instructions, production documentation and technical support for shop-floor teams.

Almajdouie Steel | Saudi Arabia

2011 - 2017

Production / Welding Engineer

- Prepared and qualified WPS, PQR and WPQ documentation in accordance with applicable international standards.
- Introduced new welding technologies and optimised fabrication workflows to improve throughput, quality and repeatability.
- Managed procurement of welding consumables and supported selection of welding, cutting and automation equipment.
- Re-engineered assembly and production processes to support increased demand while maintaining quality and safety.
- Provided technical leadership to production teams and supported problem solving, planning and customer requirements.

CGS Steel | Saudi Arabia

2001 - 2008

Production / Welding Engineer

- Commissioned new production units and monitored performance against safety, quality, cost and delivery objectives.
- Managed technical budgets, schedules, manpower coordination and continuous-improvement activities.
- Supported welding production, fabrication planning, equipment selection and process troubleshooting.
- Ensured compliance with company procedures and applicable HSE requirements.

TECHNICAL SKILLS

Robotics & Automation: ABB, FANUC and KUKA robots; robotic welding-cell integration; robot programming and optimisation; offline-programming exposure; laser seam finding/tracking; safety systems; tooling, grippers, positioners and fixtures.

Welding Engineering: MIG/MAG, FCAW and TIG; WPS, PQR and WPQ; ISO, ASME and EN standards; weld-quality control; macro examination; defect analysis and reduction; process-parameter optimisation.

Manufacturing & Maintenance: Production engineering; preventive and corrective maintenance management; breakdown analysis; equipment reliability; Lean manufacturing; continuous improvement; SOP development; cycle-time reduction.

Project & Supplier Management: Automation feasibility and ROI studies; vendor evaluation; procurement support; technical specifications; FAT/SAT; commissioning; risk assessment; HSE compliance; cross-functional coordination.

EDUCATION

Cranfield University, United Kingdom - Postgraduate Diploma in Welding Engineering

2017 - 2018

University of Bolton, United Kingdom - Master of Mechatronics Engineering

2009 - 2011

Fachhochschule Sudwestfalen, Germany - MSc Systems Engineering

2010 - 2011

University of Bolton, United Kingdom - BSc Mechatronics Engineering

2008 - 2009

Sudan University, Sudan - Diploma in Mechanical Engineering

1998 - 2000

LANGUAGES

Arabic - Native | **English** - Fluent | **German** - Basic