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Engineering Processes –

Engineering support service as Resident or Project Partnered

Product design, Tool & Die, Fixture, Automation and Packaging design

Product design, analysis and development

Product failure investigation and durability analysis

Field failure investigation

Finite Element Analysis and simulation services

Value Engineering and Value Analysis services

Additive Manufacturing - 3D printing and Direct Metal Laser Sintering (DMSL) services

Program management and project tracking

Tool & Die Making and Fabrication Processes –

Complete die design, construction, tryout and production support

In-Die fastener insertion, welding, tapping and joining operations

Machine rebuilding, maintenance and automation repair

Multi axis CNC machining centers

Wire and Conventional Electrical Discharge Machining (EDM)

Certified Welding MIG, TIG and Resistance

Sheet metal forming and fabrication

Structural assembly – system validation – run at rate

Manufacturing Processes -

Prototyping, High volume, low volume production and service support

Metal stamping ranging from 20 to 600 ton

Straight side, Gap, Transfer and Radial Partsformer Press Type

Progressive die, transfer die, compound die and line die operations

Radial Partsformers and CNC wireforming

HSLS, MPM, Carbon, Martensite, Stainless, Aluminum & Copper material

In-Die fastener insertion and tapping operations

In die welding and joining operations

Orbital forming product assembly

Secondary fabricating and certified welding operations

CNC Wireforming and screw machine processes

Weld Fixture and Inspection fixture construction

Certified MIG, TIG and resistance welding

Over-Molded, bonded plastics, sealant application and adhesive patches

Value added Fastener manufacture

Plasma, laser and waterjet cutting and blank preparation

Tumbling to product surface finish specifications

Parts cleaning & certification to published cleanliness specifications

Product heat treatment to military, automotive and civil engineering spec

Part coatings to military, automotive and civil engineering specifications

Painting and color identification processes

Laser etching product identification

Quality Processes -

Complete product testing, validation, verification and record retention

Integrated production floor & laboratory data collection and recording system

Certified and accredited fastener testing laboratory

Product cycling, durability and destructive testing operations

Salt Spray atmospheric testing and product validation

Pressurization testing and validation

Thermal cycling and validation

Weld validation and certification

Coordinate Measuring Machinery (CMM)

Automatic CNC dimensional analysis systems

LECO glow discharge spectrometer for material chemical analysis validation

RS Technologies fastener torque, angle and tension inspection cell

United Tensile validation test cell

Material grain validation - material cut, polish and etch equipment

Mitutoyo profile projectors for dimensional inspection

Rockwell material hardness validation machines

Skidmore Wilhelm fastener tension validating cells

Brown & Sharp Coordinate Measuring Machine (CMM)

First Article Testing and Pre Production Approval Process

Packaging & Shipment -

Package and Identification to military, automotive and civil engineering spec

Integrated product certification and automated packaging lines

Kitting, packaging and product sequencing services

Product Shelf Life controls

Moisture resistant and thermal control packaging

Certified Cleanliness Assurance to Standards

Bar code, RF tag and customer other specified product identification systems

Warehousing and product distribution

EDI system to support customer communications

Data Communication Systems –

Teamcenter and Trubiquity customer communication interfaces

Business System –

PLEX – Manufacturing and Business system

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