

HMH Engineering Solutions

HMH Services:

Project Management
Repair - Replace - Refurbish
System Design
Project Quality Control Plans
Long-Term Agreements
Operations and Maintenance
Asset Management

Full-Service Project Support - EPCm Capabilities and Detail Design

- Full-service engineering, procurement, and construction management
- Capabilities from maintenance projects to \$100mm+ TIC projects
- Headquartered in Houston, Texas
- Ongoing operations in the USA, Russia, CIS, Bolivia, Venezuela, Afghanistan & the Middle East
- Clients include OEM's, EPC's, IOC's, plant owner /operators, and foreign governments

Our Advantages for our Clients

- Safety First: Over 1,000,000 man-hours without a lost-time accident as of December 2014
- Registered with: ISNetwork, "A" Rating
- ISO 9001 Compliant
- Experienced: 37 years of engineering services
- Lean: Single point contact, low-overhead management philosophy

Upstream/Midstream Oil and Gas - Processing Facilities

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|------------------------------------------------|--------------------------------|-------------------------------|
| › Gas Dehydration | › Oil Treating & Conditioning | › Natural Gas Liquids (NGL) |
| › H ₂ S and CO ₂ Removal | › Condensate Stabilizer | › Import and Export Terminals |
| › Condensate Stabilization | › Liquefied Natural Gas (LNG) | › Underground Gas Storage |
| › Hydrocarbon Dew Point Control | › Compressed Natural Gas (CNG) | |

Power Plants - Typical Assignments

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|-----------------------------------------------------------------|----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| › Plant Layout Studies | Instrumentation including underground conduit duct banks | › Structural and Mechanical Stress Analysis |
| › Specification of Tanks and Miscellaneous 'Non-Skid' Equipment | › Site Preparation, Foundation and Structural Engineering and Design | › Balance of Plant (BOP) detail design for single and multiple turbine units for projects in and outside the USA |
| › Design of Skids Interconnecting Piping, Electrical and | | |

Chemicals

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|--------------------------------------------------|-----------------------------------------------|------------------------------------------|
| › Blend Silos | › Solvent Recovery | › Ammonia Purification Capacity Increase |
| › Pellet Transfer, Blending, and Loading Systems | › Alkyls Reaction System | › Liquid Product Blending and Packaging |
| › Steam Generation Piping/System | › Truck, Railcar, and Ship Loading/ Unloading | |

Refinery - Expansions, Upgrades and Reworks

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|---------------------|-------------------------|----------------------------|
| › Pigging Stations | › Tank Farms | › NOx Scrubber Reduction |
| › Metering Stations | › Pipelines, Expansions | › Coker Logistics Upgrades |
| › KOH Storage | › Controls Upgrades | › Propane Export Pipeline |

Catalyst/Metals Processing - Typical Assignments

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|-----------------------------------------------------------|---------------------------------------|-----------------------------------------------------------------------|
| › FEED for supported catalyst recycle plants | › Alumina supported catalyst facility | › Packaging line for a sulfuric acid catalyst manufacturing operation |
| › Upgrade extruder capacity for alumina support materials | › Rare earth metals catalyst facility | |



Support Software

Microsoft	Windows (Server & Desktop) Office (Outlook, Word, Excel, PowerPoint, Access) Project Visio
Aspen Technology, Inc.	Aspen In-Plant Cost Estimator (formerly Aspen Icarus Project Manager) AspenONE for Engineering Aspen HYSYS Process Modeling
Bentley	Microstation XM and v8i AutoPLANT – Piping Design AutoPLANT – Structural AutoPLANT – Equipment AutoPLANT – Isometrics Omni STAAD.Pro STAAD Foundation
Autodesk	AutoCAD 2000-2014 AutoCAD Civil 3D 3D Studio MAX NavisWorks Simulate NavisWorks Manage NavisWorks Freedom
Adobe	Acrobat Professional
E-Ware	ETank

Applied Flow Technology	Fathom
EPCON International	SiNET Engineers Aide
Business Objects	Crystal Reports
Softcover	Scan2CAD
SIS-Tech	SIL Solver
Operation Technology, Inc.	ETAP
SKM Systems Analysis, Inc.	SKM Power*Tools
AutoFEA Engineering Technology, Inc.	JL Analyzer
COADE/ Intergraph	PVElite Caesar II CADWorx
Ensoft, Inc.	GROUP LPILE
Aveva	LFM Server



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Laser Scanning & Model Integration

- Laser Scanning
 - A tool to quickly capture existing field conditions and integrate them into a 3D CAD model
 - Records Existing Dimensional Data for all Objects in Line-of-Sight
 - Creates 3D CAD Model
- Scan limited locations or an entire processing unit
- Accuracy of the data is within 3mm
- Own and operate the tool, process the data.
- Benefits:
 - Personnel Safety
 - Accurate Data
 - Reduced Costs
 - Minimize Operational Cost