Meeting the Challenges of the Oil and Gas Industry
Manufacturing a wide range of quality pipe, casings, connectors and couplings in the Economic-Techno development zone of Qingdao, China, one plant was producing 50,000 tons per year for oil and gas drilling operations and well completion sites.

The company was using a typical emulsion for their premium pipe and connectors which contain 13% chrome and experienced getting five to six pieces per cutting insert. Switching to a TRIM extreme-lubricity emulsion, they found their tool life increased to eight to nine pieces per cutting insert. Their overall tool life increased by an impressive 50%! After testing, the facility switched all their premium pipe and connecting operations to TRIM.
Meeting the Challenge

Challenging the elements and pushing the boundaries of the physically possible, the oil and gas industry is a tough, competitive business that requires near-zero tolerances and equally tough, never-let-you-down products.

That is where TRIM®, Master STAGES™, and XYBEX® products – from the leaders in the invention and innovation of metalworking fluids – set the standard. We deliver so you can deliver.

Your Business Is our Business

A truly global industry, oil and gas exploration takes place on all seven continents, the major oceans, and deepest seas worldwide. It has only been in the last century that oil and gas have been explored as a major source of energy, and since then advances in technology and engineering have brought rapid and dramatic changes in the possibilities and scope of enterprises.

Some enterprises explore and extract crude petroleum and natural gas offshore or onshore, others concentrate on the recovery of butane, ethane, and natural liquefied petroleum from oil and gas fields. The boundaries of technology are pushed, feats of engineering discover new ways to pry raw material from the heart of the earth. As the insatiable demands for energy increase, mega-wells are probing deeper and deeper. And with advanced technological developments, directional and fracturing techniques are used to retrieve large pockets of oil and gas from heretofore inaccessible areas. Tougher products and tighter specs are required as we push these boundaries.

While onshore oil wells normally run 3,000-5,000 feet deep, many offshore sites delve many miles into the earth’s core in search of crude for extraction. The pressures and temperatures are intense, the stakes are high, error can be catastrophic. Premium pipes, seals, valves, wellheads, couplings, and connectors are essential. Our metalworking fluids mean manufacturers can compete in the highly competitive arena of the oil and gas business to produce reliable pipes and dependable parts efficiently – profitably.

Using TRIM coolants, metalworking manufacturers can extend the life of their tools, get better precision and repeatability from their parts, dramatically extend sump life, reduce downtime, and pressure test their welds. With Master STAGES fluids customers can experience cleaner parts and longer rust protection, while XYBEX fluid recycling equipment extends fluid life and cuts recycling expenses. It all adds up to excellence and a better bottom line.

Alternate sources of energy such as hydroelectric, solar, wind, and nuclear are clearly major players in satisfying the global need for energy, but oil and gas are assured their importance for many years to come.
When a high-production ERW pipe facility in Wu Han, China was experiencing low welding pass rates and problems with cleanliness using a semisynthetic coolant, TRIM provided solutions to their production problems. They made the switch to a TRIM rolling fluid which ran much cleaner and solved the cleanliness problem; their sump life increased, they experienced much lower foam, low mist, better cooling, and improved their RP.

As the new pipe was produced, the specifically formulated TRIM pressure test fluid was used to check welds for a consistent, reliable product. Previously they had used water for pressure testing. With the change to TRIM, they saw better tramp oil rejection, longer sump life, and significantly improved corrosion protection.
A Texas global mineral, oil, gas, and power company was seeing high operational costs related to their metalworking fluids. Manufacturing pumps and flow parts made from 4330 steel and 4140 steel forgings, plant managers wanted to minimize operational costs through extended recycling times and by reducing metalworking fluid disposal costs.

After thoroughly testing four major brands of coolant over a 90-day period, the manufacturer concluded that the TRIM high-performance coolant increased their sump life significantly, thus reducing recycling times and disposal costs and increasing profitability. Additionally, they experienced better foam control and longer corrosion protection.
A Texas wellhead manufacturer using 8630 carbon steel was seeing poor sump life and shorter tool life from their existing coolant. In 2009 they switched to TRIM and experienced dramatically longer sump and tool life.

After two and one-half years of substantial savings with a TRIM full emulsion, they made the change to the extended-life, semisynthetic TRIM MicroSol®. Their machines had in-ground sumps with the ways turned all the way up to get the maximum amount of lubricating oil in the machine ways and slideways – a common practice. As a result, they were experiencing a lot of way oil in the sump. So they made the switch to MicroSol, as the coolant emulsifies the way oil making it easy to skim off. With the MicroSol and a good fluid maintenance program, they have almost indefinite sump life, oil is split out in the sumps, and there is less oil odor in the plant.
Master Chemical has been recognized for more than 60 years for its TRIM family of metalworking fluids for all types of cutting and grinding operations. Known worldwide for superior performance, TRIM meets the stringent demands of specialized industries such as oil and gas exploration, aerospace, and automotive.

For the full range of cutting and grinding applications for synthetics, semisynthetics, soluble oils, pipe rolling fluid, expander oil, and pipe testing fluid, TRIM offers customers longer tool and sump life, better finished parts, and a better bottom line.

**TRIM coolants help customers realize**
- significantly reduced fluid costs
- lower machine tool costs
- reduced downtime and labor
- lower disposal costs
- assured code compliance
- a safer work environment for employees
- immediate savings to the bottom line

Master STAGES parts washing cleaners, corrosion inhibitors, and maintenance cleaners keep customers environmentally compliant, running at peak performance, and more profitable. Whatever the challenge, there’s a Master STAGES product sure to be the right solution for the job at the right price.

**To maximize productivity, minimize waste**
Master Chemical invented XYBEX fluid recycling systems for recycling coolants and cleaners. As properly maintained coolant can last indefinitely, a fluid management program using XYBEX equipment literally pays for itself. Ask your Master Chemical representative which XYBEX options will give you the best return on your investment.
For prices or additional information, contact your Master Chemical Corporation Distributor.

For more information on how you can troubleshoot your manufacturing problems, improve your production, and increase your profitability, contact your Master Chemical representative or distributor, or visit us at www.masterchemical.com