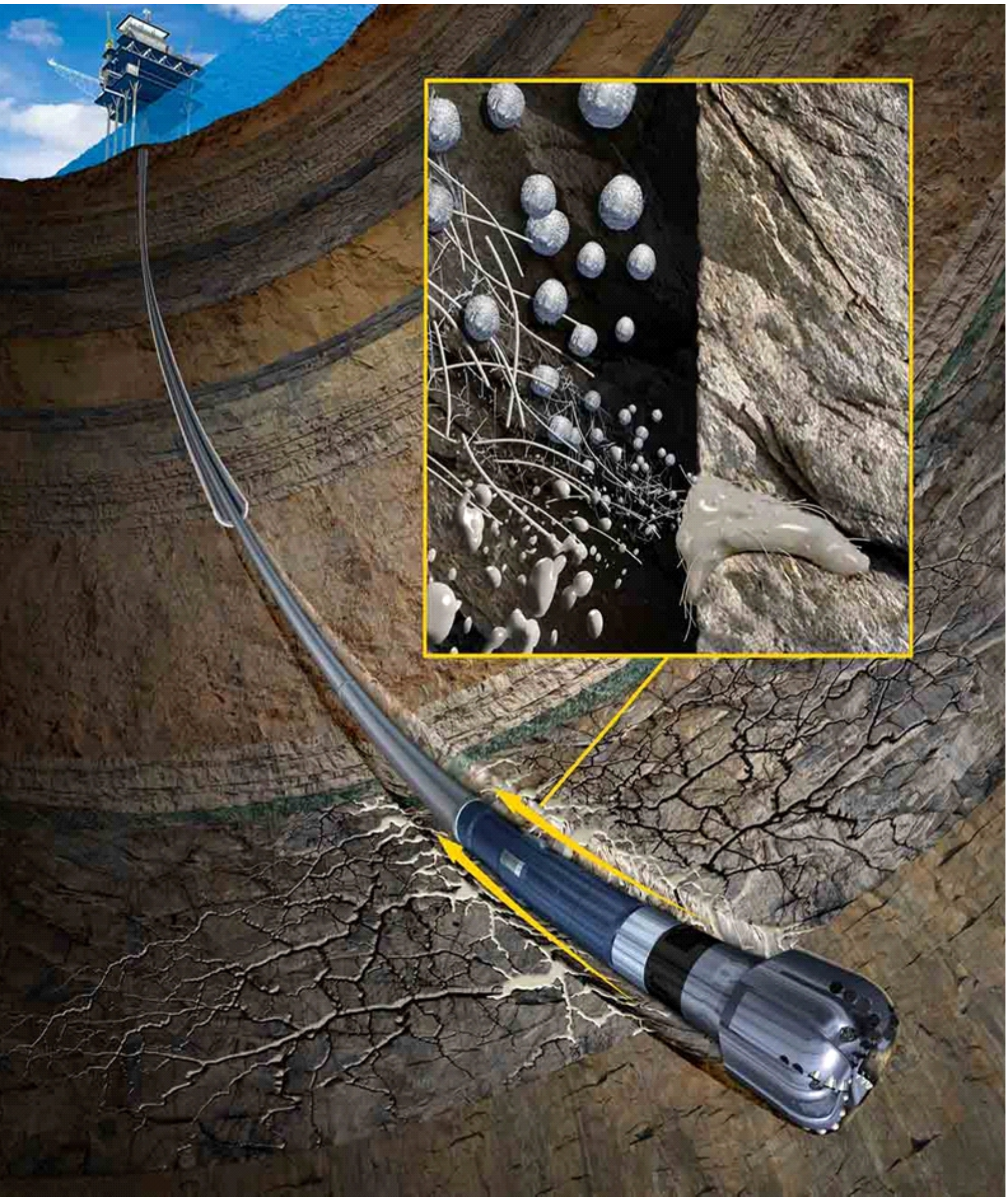




European Mud Black Gold Co

2023



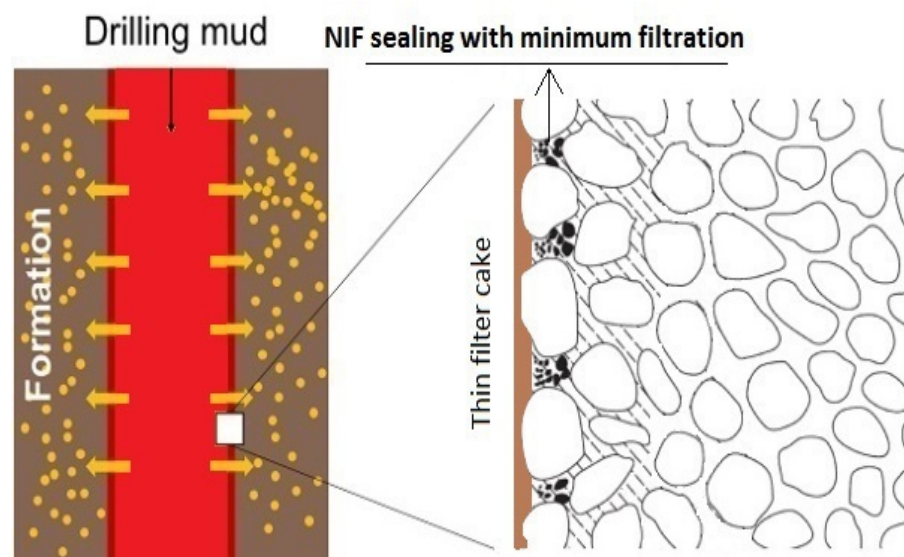
Introduction of European Mud Black Gold

European mud black gold company (EMCBG) is a local manufacturer, developer and provider in drilling fluid products that established on 2016. EMCBG was registered as first company in field of advanced drilling fluid additive and loss circulation materials in AVL of Iranian oil ministry (EP system). The EMCBG has an agreement with EMCAS Norway through Black Gold Solution Norway (EMCBG's sister company).

Based on new and advanced products received initially from Norway with related technical and engineering guideline documents, we have been able to introduced a range of highly effective products that prevent loss circulation in the wells and reduces the cost of drilling considerably.

EMCBG's NIF (Production and multi pressure zones)

NIF (Non-Invasive Fluid) is an advanced self-sealing product designed for high differential pressure conditions and multi-pressure zone permeable formations and can be used in production zones. It has been carefully designed for effective micro-fracture and sandstone applications by providing strong sealing and suitable solubility, prevents hole instability and permeability impairment and increases well productivity.



Febricoat (NIF Product)

Febricoat is an effective new product in NIF family that form a thin film on the surface of permeable formations such as sandstone so that a seal is formed without impacting the permeability of the formation or introducing damaging particles to the production zone. The thin high-pressure seal ensures stability and fewer disturbances from near-bore mechanical disturbance and fluid behavior. Once the seal is formed, it will remain in place until dissolved. Febricoat will eliminate preconditions for differential sticking in high differential and multi-pressure zone environments.

Febricoat is easily applied as a one-sack product and creates an effective pressure seal at significantly lower concentrations than is normal for these applications.

Advantages

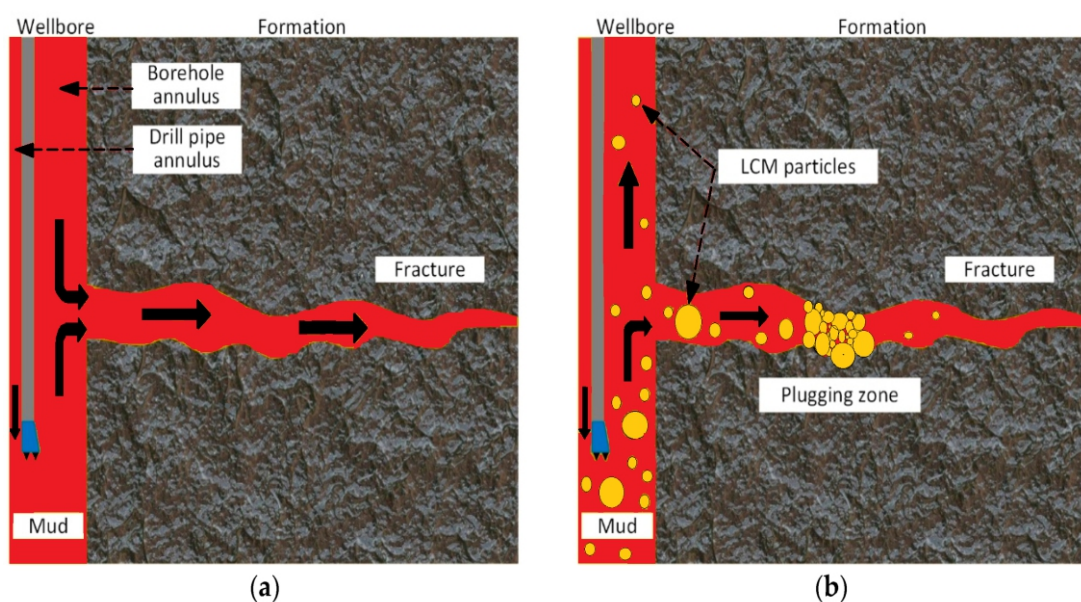
- Suitable for water and oil-based fluids
- Can be mixed directly into fluid system
- Reduces dynamic filtration loss
- Uses reactive clays to give a perfect seal across the filter cake not allowing any LGS contaminants to pass
- Prevents formation of thick filter cake
- Minimizes, if not completely avoids the likelihood of differential sticking.
- Increases formation stability
- Not affected by contaminants and is environmentally friendly

EMCBG's LCM (Production and Non-production zones)

The EMCBGA's Lost Circulation Material (LCM) is an advance product which designed for low to high loss situations. It has been carefully designed for effective fracture applications by providing strong sealing and suitable solubility to use in production and non-production zones.

Febricoat (LCM Product)

If Febricoat is applied as a sweep pill, a higher product concentration may allow for sealing of fractures up to 1mm (1000 μm) in fractured carbonates using a plugging action. It can be used as a sweep to seal off seepage zones, or as a preventative sweep ahead of cement to minimize cement seepage loss.



Boremat (LCM Product)

Boremat is a blend of cellulose fibers and flaky lost circulation materials used in water-base, synthetic/oil-base and work over fluids improving borehole stability by preventing seepage loss and other losses. It enhances particle size distribution and seals depleted sands with minimal adverse effects on rheology and filtration control properties. Boremat's fibers are strong and resilient; they will not readily disintegrate during circulation. Boremat is easily applied as a one-sack product and creates an effective pressure seal at significantly lower concentrations than is normal for high-loss applications.

Advantages

Contains strong and resilient fibers and a wide range of graded particles that bridge within a fraction of an inch of the wellbore, thereby creating an efficient seal and eliminating the risks of being scraped, disintegrated or washed off the formation.

Compatible with most water-based, synthetic/oil-based drilling fluids as well as work-over fluids.

Effective in both deep-water and shallow water applications.

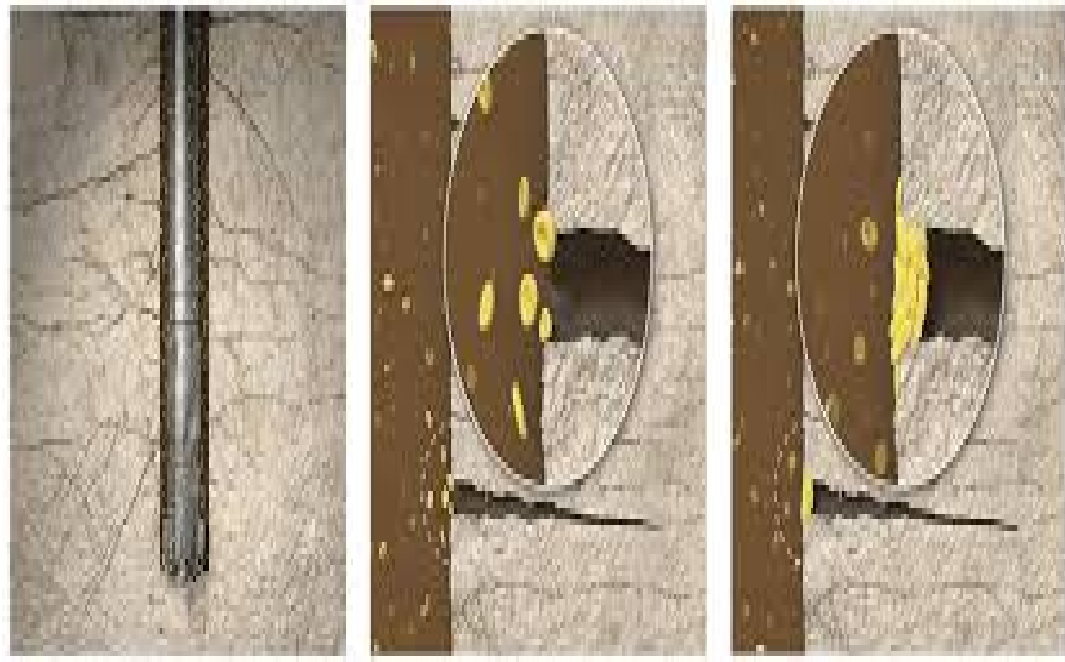
Very dependable and easy solution to lost circulation problems.

Febribridge

Febribridge is a cellulose-based product which differentiates itself from conventional LCMs by forming a high-solids, high-fluid-loss squeeze plug inside fractures without the need for activators and cross-linking agents. The product is therefore effective in thief zones and vugular formations where other LCM products fail to perform. Febribridge cures both severe lost circulation situations and also strengthens loss zones. This enables further drilling operation to target depth of the interval. Febribridge has special proprietary binders which enable it to form interlinked plug structures inside fractures. Febribridge is not affected by any contamination and can be used in any water, oil or brine-based fluids.

Advantages

- Cures severe lost circulation and strengthens the loss zone.
- Eliminates the need of cement plug or side-track.
- Compatible with most water-based, synthetic/oil-based drilling fluids as well as work-over fluids.
- Effective in both deep-water, shallow water and land applications.
- Very dependable and easy solution to severe lost circulation problems.
- Environmentally friendly and non-toxic.
- Does not require any Activator, Retarder or cross linking.
- Stable through a wide range of pH.



Other products

Furthermore, EMCBG can supply all above mentioned products based on new polymer the latest global technologies from Norway. These products are such as AURACOAT (NIF), AURABRIDGE (LCM), AURAPLUG (GEL PLUG), AURACAP (LIGHT WEIGHT), FEBRIBREAK/AURABREAK (BREAKER) but not limited to them.

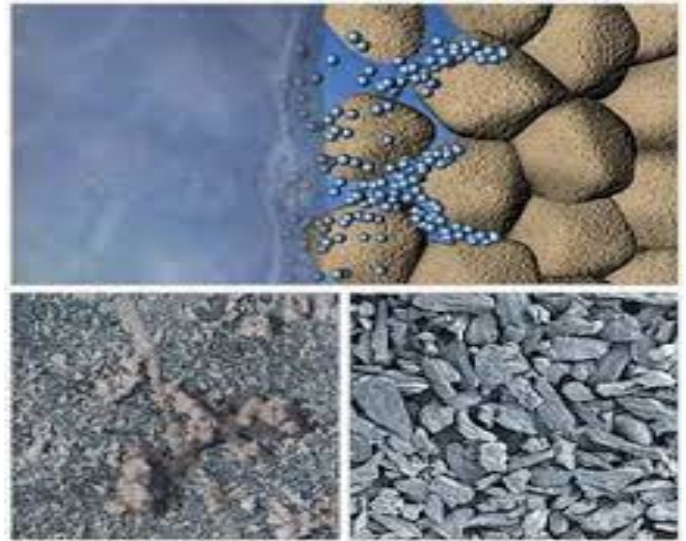
EMCBG Local Products

EMCBG have already setup manufacturing plant in Arvand Free Zone (Abadan). The necessary investment has been made, in order to provide all end users in drilling industry with latest technology.

X-Tra Seal R

X-Tra Seal R is one of the local advanced products as LPM (Loss Prevention Material) were designed based on the latest available technology in the world and in accordance with Iranian Oil & Gas fields conditions.

X-Tra Seal R product consist of wide various of particles in type and size to provide the smart suitable combination to use in production, non-production and multi pressure zones. X-Tra Seal R create the thin seal skin with high differential pressure strength.



Advantages

Uses in active mud system to strengthen the formation and prevent the loss risk

Mechanical shale inhibition by reducing of dynamic filtration.

Uses mud pressure and formation permeability to form a non-permeable natural skin

Perfect seal across the seal skin not allowing any LGS contaminants to pass

Possibility of multi-pressure zone drilling without worrying of fracture inducing

Prevention of thick seal skin creating

Minimize the differential sticking risk

Prevents hole instability and increases formation strength

Minimum effect on productivity and return permeability because of at least invasion in formation

Efficient solution for seepage losses curing and shale drilling

Acid soluble and environment friendly

Compatible with water-based, synthetic/oil-based drilling fluids.

Effective in low concentrations about 4 lb/bbl.

X-Tra Seal M

X-Tra Seal M is an advance LCM (Loss Circulation material) product designed in order to control the moderate loss rate from 30 to 100 bbl/hr. based on the latest global science and technologies and based on Iran oil & gas fields conditions. X-Tra Seal M product consist of wide various of particles in type and size to provide the smart suitable combination to use in production, non-production and multi pressure zones. X-Tra Seal M is a perfect and fast solution for partial loss treatment and increasing the wellbore strength of future trips and well drilling process.



Advantages

Designed to form deep seals in fractured formations and isolate structures from hydraulic effects of fluid column.

Flexible bridge that reduces the risk of breakage or removal due to drilling operation trips

Effective in environments with high differential pressure.

Cures seepage to partial losses and helps remediate lost circulation problems.

Creating an efficient seal and effectively reducing the risks of being scraped, disintegrated or washed off the formation.

Combination of Fine, Medium and Coarse Particles make this a versatile product to cover a wide range of formation structures and uses.

Minimize the differential sticking risk

Can be used in combination with X-Tra Seal R and X-Tra Seal S to provide matrix material if required.

Compatible with water-based, synthetic/oil-based drilling fluids.

Acid soluble and environment friendly

Effective in low concentrations about 25 lb/bbl.

X-Tra Seal S

X-Tra Seal S is an advance LCM (Loss Circulation material) product designed in order to control the severe loss rate more than 80 bbl/hr. to complete loss based on the latest global science and technologies and based on Iran oil & gas fields conditions. X-Tra Seal S product consist of wide various of particles in type and size to provide the smart suitable combination to use in production, non-production and multi pressure zones. X-Tra Seal S is a perfect and fast solution for severe loss treatment, bridge matrix creating and increasing the wellbore strength of future drilling trips.

Advantages

Fast and simple operation with perfect performance

Cures severe loss circulation whilst strengthening the fracture structure

Designed to form high strength structures inside fractures without chemical reactions

Suitable for both broken ground and heavy fractures

Not affected by contaminants and can be used in all fluid types

Can be used in combination with X-Tra Seal R and X-Tra Seal M to provide matrix material if required.

Compatible with water-based, synthetic/oil-based drilling fluids.

Acid soluble and environment friendly

Effective in low concentrations about 50 lb/bbl.



EMCBGA has a most experience engineer in design and field operations, with experience over thirty years
We are ready to participate in your loss circulation challenges, understanding the problem, scientific thinking and design and present the logical solutions.

EUROPEAN MUD BLACK GOLD Co.

Solution you can count on

Expertise you can trust

Reliable Engineering, Manufacturing and Services

Quality Assurance

Partnership

Technology

European Mud Black Gold (EMCBG) has established and implemented a quality assurance management system in order to:

- Prevent mistakes and defects in our products and services.
- Reduce costs and increase profitability.
- Provide and increase customer satisfaction.
- Establish effective communication internally and with our customers.

Partnership with customers is important key for success.

- The company always builds partnership with customers.
- It creates an environment of trust and openness.
- It prefers long-term solutions to a short-term fix.



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