DRA

Pipelines Flow Chemicals (L.L.C)

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CONTENT

1. About us
2. Why Choose PFC
3. How DRA Works
4. Applications of the Drag Reduction Agent
5. DRA PLANT in Glance
6. PFC Services

About us

Pipelines Flow Chemicals company (PFC) is a manufacturer of wide range of drag reducing agents (DRA), under the license of FlowChem USA, to reduce energy losses and pressure during pipeline operations in order to improve throughput of pipeline networks. And to optimize the flow of hydrocarbons across the entire API gravity spectrum.PFC/FlowChem is committed to delivering the most cost-effective, energy efficient DRA solutions in the industry. With DRAs pipeline flow can increase up to %100 and achieve drag reduction of up to %80.

Why Choose PFC

Industry Leader

Dedicated to DRA, PFC/FlowChem is dedicated to the development, production and application of drag reducing agents, devoting all resources to the manufacturing, packaging, distribution and support of DRA or flow improvers. Because of this focus, PFC/Flowchem established a reputation as an industry leading DRA provider, optimizing throughput of pipeline systems and increasing the profitability of pipeline operators across the globe.

Research and Development

DRA for Every Pipeline System, PFC/Flowchem chemists and researchers have developed a wide range of DRA products to optimize pipeline operations. From light, medium, and heavy crudes, to specialty and refined fuel blends, Flowchem offers a proven solution to improve pipeline flow rate and energy efficiencies. If a pipeline system requires a specialized solution, our R&D team will customize a DRA product and injection system to meet specific climates and applications.

Experienced Team

A Diverse Team of Industry Experts, A key factor in our success is the collaboration between our experienced personnel to deliver optimal DRA solutions. Our team ranges from hydraulic experts, chemists, and research personnel to engineers with backgrounds in pipeline design and construction.

Flow Consultants

Providing Pipeline Optimization, Our goal is simple help clients optimize their pipeline operations. Our engineers and hydraulic experts offer step-by-step guidance on improving pipeline operations. Our product specialists assist with proper injection of DRA and support operational data analysis.

Responsiveness

The Industry's Most Responsive DRA Provider, When pipeline operators need efficient solutions to maximize assets, PFC/Flowchem has the fastest time to market in the industry.

DRA Product

Stable and Resilient DRA Formula, Our DRA is a non-hazardous and nonflammable product that can be transported by plane, so pipeline operators can receive their DRA quickly and efficiently. Additionally, our DRA is a more stable formula, so the flow improver remains homogeneous longer while retaining maximum effectiveness.

Customized Product

Specially Formulated DRA for Any Pipeline, PFC/Flowchem's team of chemists and research personnel can provide a custom-made DRA product formulated to optimize any pipeline system. Our experienced team not only creates a specialized blend to match a pipeline's specific needs, but also designs unique injection equipment and supply chain solutions to accommodate the product's safe and efficient delivery.

How DRA Words

DRA reduces hydrocarbon flow turbulence and drag inside pipelines, Hydrocarbon flow is turbulent in most petroleum pipeline systems. Turbulent motion results in energy loss due to friction between the flowing fluid and the pipeline wall, as well as friction between the flowing fluid itself. drag reducing agents (DRA) reduce turbulence and frictional losses in pipelines to improve throughput and energy efficiencies.

The Mechanics of Drag Reduction

DRA functions on a molecular level to decrease turbulence, thereby reducing the frictional pressure losses in a pipeline. Our Drag Reduction Agents are long-chain hydrocarbon polymers that reduce friction near the pipeline walls and within the turbulent fluid core. reduce energy loss by dampening rotational flow and fluid turbulence in crude and fuel pipelines.

1.Turbulent Flow

In turbulent liquid flow, the hydrocarbon molecules move in a random pattern rather than a linear flow, creating drag within the pipeline. Turbulence causes energy loss and reduces throughput of a pipeline.The Reynolds number (Nre) is a dimensionless number used to determine the level of turbulence in a pipeline. Once the Reynolds number (Nre) is calculated, the effectiveness of our DRA and the reduction of the frictional losses can be predicted.

2.Pressure Reduction

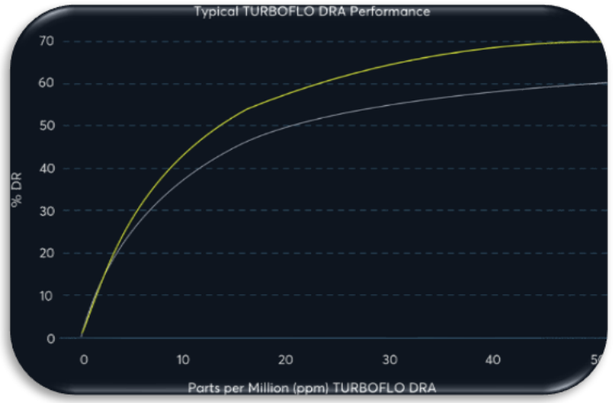
Optimal pipeline operations depend on consistent pumping pressure to deliver flow capacity. Due to aging systems, corrosion, abrasions, and pipeline bottlenecks, lowered Maximum Allowable Operating Pressure (MAOP) can result in reduced throughputs. Utilizing DRA allows pipelines to maintain optimal throughput while operating at the lowered MAOP.

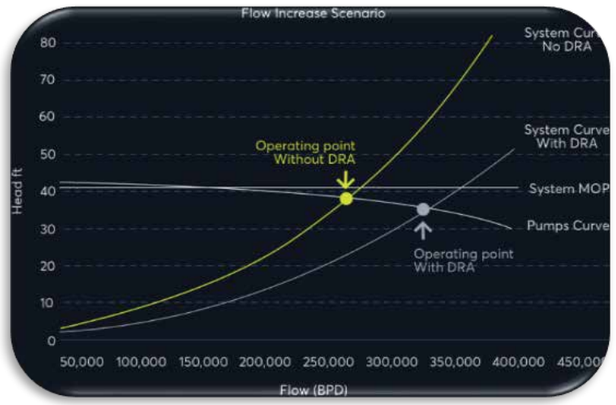
3.Flow Increase

Our drag reducing agents align turbulent fluid molecules to create a linear, energy efficient flow, By adding only a few parts per million of DRA, drag within a pipeline system can potentially be reduced by as much as %80 and the flow rate can increase up to %100. Utilizing DRA allows the pipeline to operate at a higher flow rate while maintaining the same pressure.

4.Drag Reduction Performance

Percent drag reduction compares the differential frictional pressure drop required to move a given fluid in a set pipeline with and without DRA.The graph represents a range of performance curves for turboflo® DRA in various hydrocarbons. DRA injection rate is shown in parts per million (ppm) versus the delivered performance measured in percentage drag reduction (%DR).





Applications of the Drag Reduction Agent

1.Light to Medium Crude:

Our DRAs for Light to Medium Crude are proven DRA solutions for the optimization of crude pipeline operations by improving the flow in condensate and light to medium applications.

2.Multi-Phase:

Our Multi-Phase DRA is injected into pipeline systems to achieve optimized flow patterns thus reducing back pressure. our formulation ensures a fast dissolution into the liquid hydrocarbon phase

3.Heavy Crude:

Heavy crude oil is frequently a challenge for traditional drag reducing agents. At crude oil gravities below 23° API gravity, traditional DRAs lose their effectiveness and fail to completely disperse within the heavy crude, resulting in minimal to zero drag reduction.

4.Refined Fuels:

Refined fuels flow at high velocity and greater turbulence within a pipeline. our DRA for Refined Fuels is used to optimize flow and throughput of gasoline and diesel applications by establishing a linear flow in extremely turbulent environments, conditions and pipelines.

5.Specialty:

Our Specialty DRA is formulated for unique applications: tanker loading lines, intra-refinery pipelines, crude gathering processes, oil platforms and subsea wellheads applications. This DRA product line is often used in nontraditional environments where flow characteristics can be improved.

DRA PLANT in Glance

- Pipelines Flow Chemicals Company was established by AHQ Group in 2011 manufacture High Quality Flow Improvers.
- First Commercial Product DRA was Produced in Year 2012.
- Current Production of DRA Capacity is nearly 9 million Gallons per year.
- Plant Area is 20,000 square meters, will increase to 75,000 square meters.
- Plant Built up Area is 4,300 square meters, will increase to 16,000 square meters.
- Latest Proprietary Granulation, Cryo Grinding & and Blending Equipment is Installed.
- Plant has 2 Independent Processing Units.

PFC Services

- Drag Reducing Agent; Water-base, Vegetable Oil-base, Alcohol Base.
- Storage & Mixing.
- Dosing Skid & tools.
- Mobilization of product & equipment.
- Skilled manpower for operation; Filed operators, Technicians , Maintenance, Safety and Engineers.
- Quality Control for Raw Material and finished products.
- Performance Monitoring.