

# Ethylene Plant Petroflo\* Antifoulants

## Overall Fractionation Train Treatment Capabilities

GE Water & Process Technologies has researched and developed advanced technology used to protect fractionation trains from fouling due to polymerization.

Polymer fouling in olefin plant fractionation trains is a serious operating difficulty. In most ethylene plants, the depropanizer column is the primary bottleneck, limiting throughput and end of run conditions. Unplanned shutdowns or throughput restrictions due to fouling are not acceptable.

Ethylene producers are pushing run-lengths between major turnarounds to 5-7 years, with a target of up to 10 years.

Continued pressure on ethylene margins, chemical treatment program costs should not be any higher than for current operating conditions, i.e., the treatment program must be highly cost-effective.

This continuous development has resulted in a comprehensive range of high performance programs that offer complete protection across all feed types, operating conditions and temperatures. This exceptional offering, along with GE superior technical support, has proven performance and cost effectiveness.

### Treatment Program Capabilities

Petroflo 20Y90 antifoulant programs are cost effective for all types of fractionation train problems. The following table summarizes the capabilities of Petroflo 20Y90 Series antifoulant programs.

| Plant Situation                      | 20Y97 | 20Y98 | 20Y99 |
|--------------------------------------|-------|-------|-------|
| Bottoms temp <100°C (212°F)          | X     |       |       |
| Bottoms temp 100-200°C (212°F-392°F) |       | X     | X     |
| Bottoms temp >200°C (392°F)          |       | X     |       |
| Suspect high oxygen / peroxides      |       |       | X     |
| Free residual testing required       | X     | X     | X     |
| Plant wants lower cost               | X     | X     | X     |
| Plant performance is unacceptable    | X     | X     | X     |



The information below summarizes our capabilities in fractionation train technology designed to effectively control polymerization under all operating conditions.

| Product Name    | Function                 | Comments                                    |
|-----------------|--------------------------|---|
| Petroflo 20Y104 | Stable Free Radical      | Excellent free radical inhibitor            |
| Petroflo 20Y25  | Dispersant               | Used in conjunction with SFR, if applicable |
| Petroflo 20Y100 | Antioxidant              | Equivalent to competitive patents           |
| Optifrac        | New Generation Inhibitor | New, patented inhibitor technology          |



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