

## HF-N

The BUHLMANN GROUP offers a completely new service to the oil refinery market and delivers a full range of low-temp carbon steel from stock:

- Pipes
- Fittings
- Flanges
- Bars
- Welding consumables

These products are suitable for use with hydrofluoric acid (HF) as a catalyst in converting isobutane and low-molecular-weight alkenes into alkylates (a high quality gasoline component).

As the chemical composition of these carbon steel piping components is specifically designed for use in such applications, a number of key refineries worldwide are already using this special service provided by BUHLMANN to their complete satisfaction.

NACE has created a bespoke and unique specification for these materials in the form of NACE paper No. 03651. ASTM has also adopted this grade quality as HF-N. Quality requirements can be found in the supplementary requirements of a number of standards including:

- ASTM A333 S2 for low-temp HF-N carbon steel pipes
- ASTM A960 S78 for HF-N carbon steel piping fittings
- ASTM A961 S62 for HF-N carbon steel flanges, forged fittings and other forgings

Alongside these stocked piping components, BUHLMANN offers a complete range of special forgings, machined in and certified by our dedicated facility **NRG Special Products**. Examples of such products include reinforced branch outlet fittings such as various types of outlets, machined from stocked HF-N bar material.

We stand for premium service.

