ChromeMaster

Run high-chrome tubulars safely and reliably

Applications

- Non-marking & non-ferrous tubular handling requirements
- High-chrome tubulars
- Handles tubular sizes from 2.375 to 14 in.
- Onshore/offshore operations

Features and Benefits

- True non-marking to tubulars
- Recommended for SuperChrome and chrome tubulars with chrome content higher than 13%
- Safely run high-chrome content tubulars
- ChromeMaster inserts prevent ferrous contamination of tubular
- Compatible with Flora™ connection evaluation system (CES)
- Easily adaptable for steel pipe by changing grit inserts, eliminating the need to swap out power tongs

The Baker Hughes ChromeMaster™ power tong system is ideal for successful running of high-chrome tubulars. This cost-effective system is proven, through many years of chrome running experience, to eliminate marking and damage to tubulars. The ChromeMaster system handles tubular sizes from 2.375 to 14 in. The ChromeMaster system fits in the power tongs, making them suitable to handle the high-chrome tubulars.

The tungsten carbide jaws in our ChromeMaster tong system handle more than 75,000 ftlb of torque, with true non-marking during makeup operations. The simple, highly reliable design eliminates the costly downtime incurred when changing outburst bladder-type devices used in competing systems. Jaws are easily interchangeable to accommodate different tubular sizes and they do not need to be inverted when making or breaking connections.

The ChromeMaster jaws close, grip, and cover ~315° of the pipe before any rotation occurs. This minimizes any slipping or marking of the pipe. There is no need for the use of mesh inserts—which have significant safety and efficiency issues—to enhance friction.

ChromeMaster tungsten carbide coated dies eliminate any carbon steel contact with the tubulars, see table below for typical impurities content in carbide coatings. The dies reduce marking to an absolute minimum, consistent with the running guidelines from leading pipe OEMs.

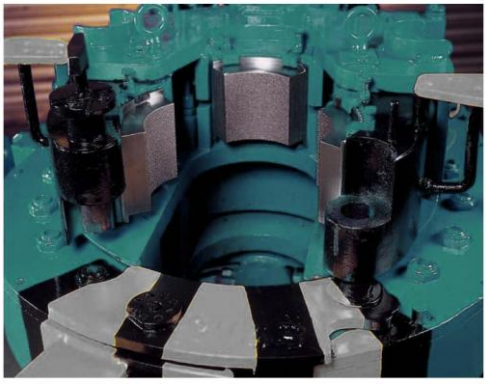
The high reliability and proven functionality of these tools ensure safe operation when picking up high-chrome content tubulars.

ChromeMaster technology greatly reduces marking severity

Marks left on the surface of tubulars from torquing or lifting operations depend on the type of tong or elevator being used and the torque or load applied.

Conventional carbon steel dies can leave marks up to 0.040 in. deep. Any marks left by ChromeMaster carbide coated dies will be significantly less than this value, and in many cases the depth of the marks will be less than the average surface roughness of the tubulars (see table below for typical penetration levels).

The high coefficient of friction for the tungsten carbide coating (>0.6) used in the elevators, spiders, and hand slips ensures that safe and consistent gripping is always achieved, even on coated tubulars.



Typical penetration levels	
ChromeMaster tong, 5.5 in. tubular at 12 kftlb	<0.003 in.
ChromeMaster tong, 5.5 in. tubular at 22 kftlb	<0.004 in.
ChromeMaster tong, 7 in. tubular at 30 kftlb	<0.006 in.
SXDL hand slips at 75-ton, uncoated tubular	<0.002 in.
350-ton Varco elevator at 150-ton, uncoated tubular	<0.003 in.
350-ton Varco elevator at 150-ton, coated tubular	<0.006 in.

In tests of our 14-in. ChromeMaster tong for a super major oil company, die penetration of 0.007 in. was measured on 7-in. SMS 25/35 chrome pipe, at makeup torque of 75,000 ftlb.

For more information about how the ChromeMaster system can maximize the success of your next CRA tubular running job, contact your Baker Hughes representative.

Additional system components maximize success

The integrated ChromeMaster system comprises a number of tools that work together for a successful chrome running job. In particular, the LoadMaster™ and the DopeMaster™ are highly recommended as essential components of a ChromeMaster system package.

The LoadMaster hydraulic single joint weight compensator eliminates the likelihood of galling by reducing weight on the threads when making or breaking a connection. It is ideal for pulling CRA pipe since it prevents damage from pin “jump-out.”

The DopeMaster dope applicator applies an even coating of thread compound on the connection. This minimizes galling and potential wireline problems caused by excess dope extruding into the pipe ID. This air-operated tool operates quickly, typically 7 seconds per connection and is ideal for running screens.

Our modified ChromeMaster tongs and handling equipment are ideal for running expandable casing. We also use full ChromeMaster jaw systems for completion assembly work, including special internal gripping ChromeMaster systems.

Baker Hughes provides all other accessories needed to successfully run CRA pipe, including, rubber matting for the catwalk and v-door, stabbing guides, drifts, and hole covers.

Safety and handling

Before handling, transporting, or use, review the Owner’s Manual for guidance.

Typical impurities content in carbide coatings	
Element	**Max content (%)**
Al	0.001
As	0.002
Bi	0.0001
C	0.005
Ca	0.001
Co	0.001
Cr	0.001
Cu	0.001
Fe	0.005
K	0.0015
Mg	0.001
Mn	0.001
Mo	0.001

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