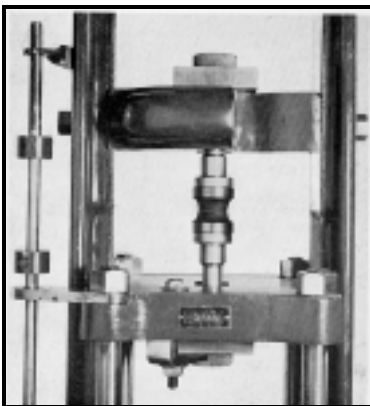


# Chapter VI.

## Quality And Reliability Control of Molded Mechanical Goods for Oil field Use

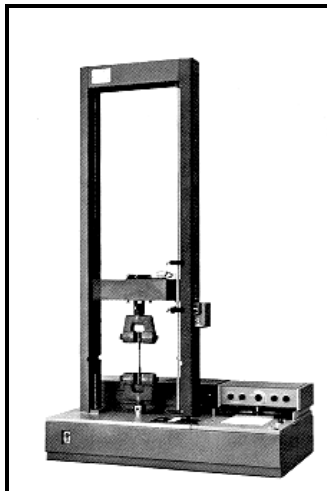
Rubber to Metal Pull Tester



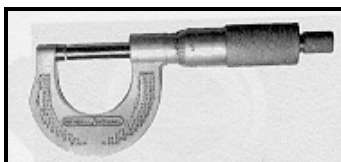
Vernier Caliper



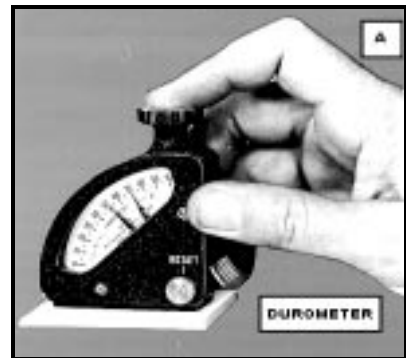
Quality Testing  
instruments



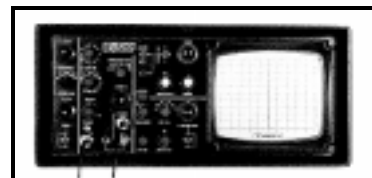
Ultimate Tensile  
Tester



Micrometer



Shore A Durometer



Ultrasound Adhesion  
Tester




## Chapter VI. A

# Rubber Elastomers



**Failure: The only true yardstick by which one can gauge success. If there is never a failure, there will never be a success.**



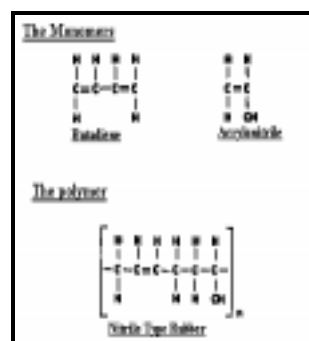
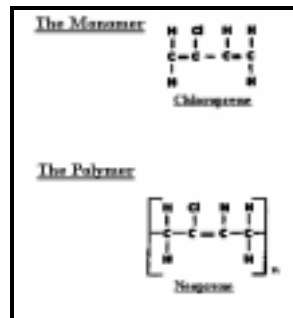
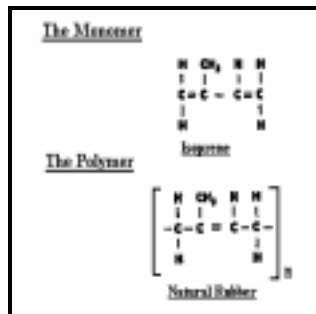
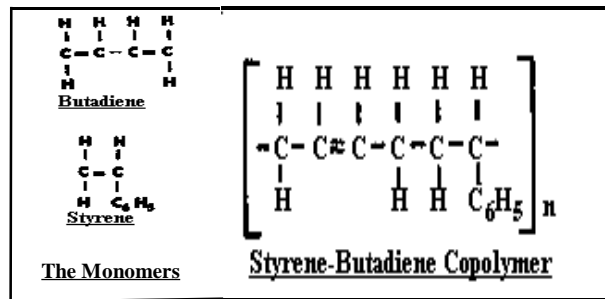
## RUBBER ELASTOMERS

Of all the synthetic rubber elastomers produced none have been specifically designed for use in oil field applications. This is a very ironic phenomenon in that practically all synthetically-produced rubber elastomers are manufactured from materials produced in the oil field. The oil field is one of the few industries that actually consumes products created from raw materials produced from its own operations. Why then do we not have materials that are designed to meet oil field specs and demands? The answer has always been one of economics. It has always been too expensive to produce rubber materials that would stand the gaff in the oil field for the return on investment was not as fast as or equal to that say for tires.

We in the oil field are not completely exonerated here for we have through the years accepted what is available and have found ways to make it work - Only by extremes of trial and error and by a "seat of the pants" ingenuity have the rubber mechanical goods manufacturers been able to design formulas that would take the conditions of oil field use. Here again, without specifications to meet the trial and error method has been the only means available.

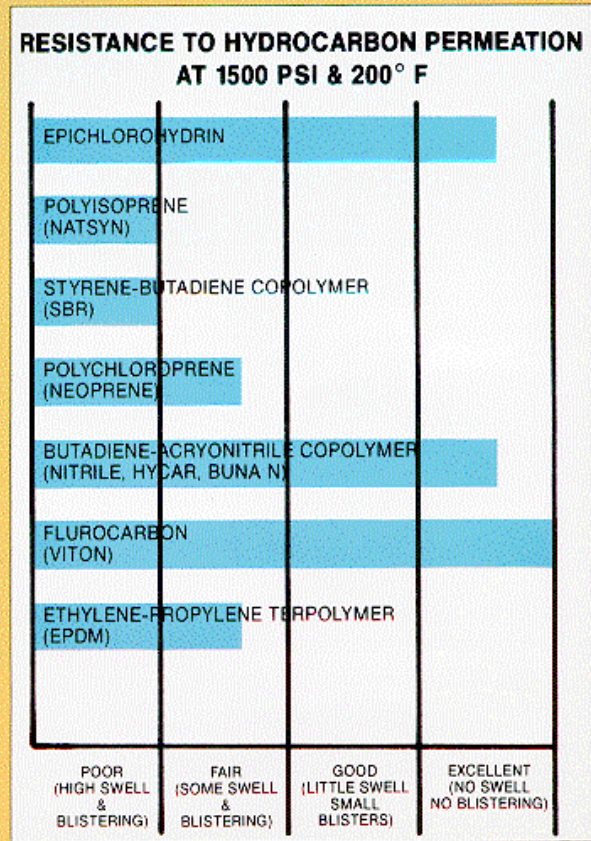
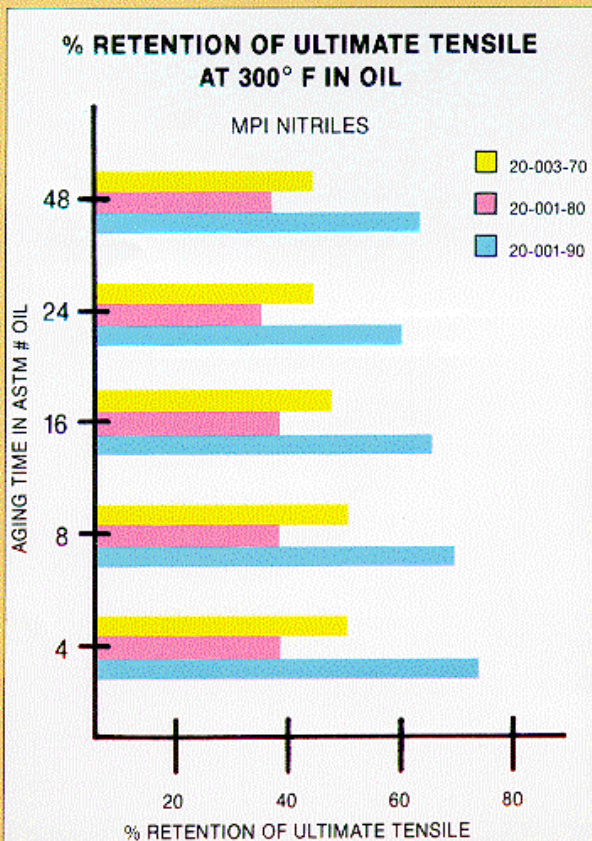
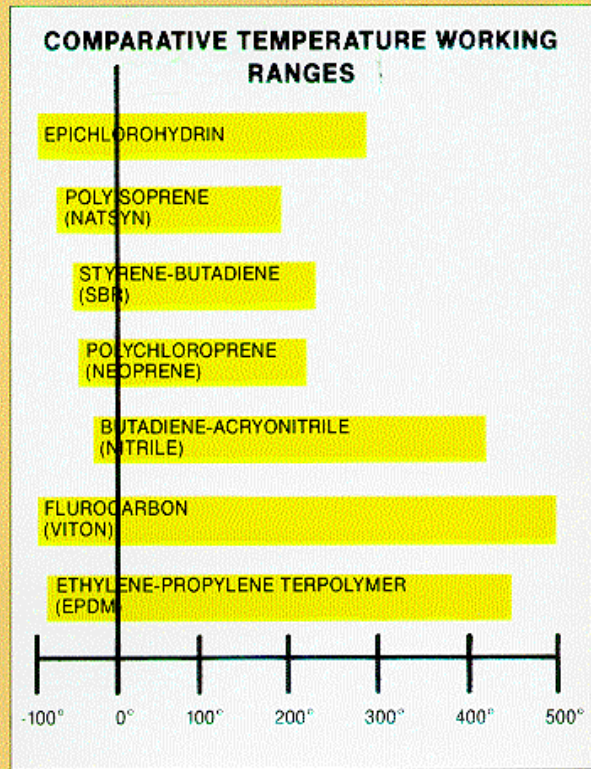
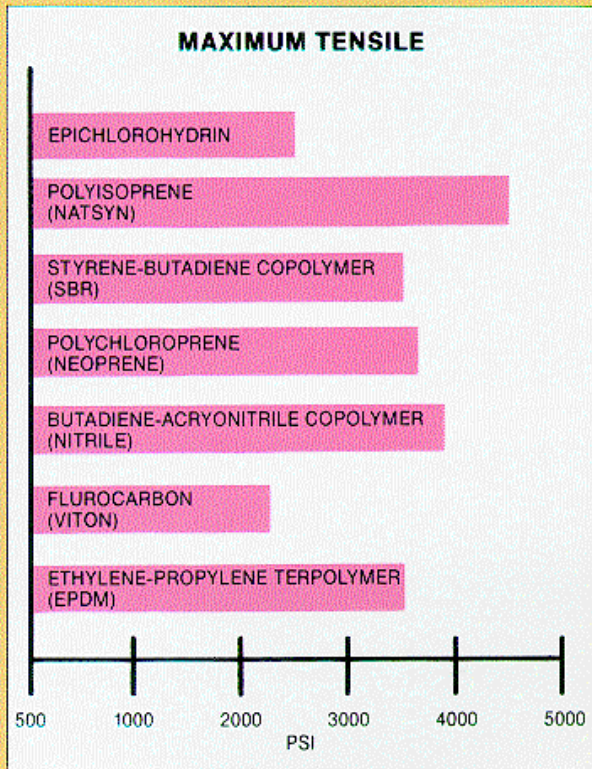
In the past 25 years there has been a voluminous amount of information collected on materials available, but it is proprietary to each molded mechanical goods vendor and is only used to the extent required by his customer.

Of the elastomers available there is most likely some place in exploration, drilling or production that each one can be utilized. Due to their chemical composition they possess characteristics that make them advantageous or unreliable to use in particular circumstances. It is difficult to list all the properties each possess, but the following charts will indicate some of those considered to be of concern in the choice for oil field products.



**CHEMICAL FORMULATIONS FOR SOME OF THE IMPORTANT ELASTOMERS**

# Our Elastomeric Engineers Have Launched a New Era in Compounding Rubber Formulas.



## MPI PRODUCT GUIDE

MPI COMPOUND	GAS SERVICE	STEAM SERVICE	ABRASION RESISTANCE	ELECTRICAL RESISTIVITY	LOW TEMP. SERVICE	HIGH TEMP. SERVICE	WELL HEAD STRIPPERS	PIPE & LINE WIPERS	SEALS	PACKERS	VALVES	GUIDES
10-003-75			✿				✿				✿	
10-003-85			✿									
20-004-70				✿				✿	✿	✿	✿	
20-005-80	✿						✿		✿	✿	✿	
20-001-90					✿			✿	✿	✿		✿
20-001-95					✿			✿	✿	✿		✿
30-002-45							✿					
30-001-55							✿					
30-001-65							✿					
50-002-80		✿					✿		✿	✿		
60-001-65			✿									
70-001-90								✿				



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