

## P R E F A C E

So far there has been but little systematic investigations on the high temperature vulcanization of rubbers. In the present thesis we have studied some aspects of high temperature vulcanization of natural rubber. The subject matter of this thesis have been presented in seven different Chapters.

The introductory Chapter deals with a brief critical survey of the prevailing views regarding earlier work in this field and the scope of the present investigation.

The experimental procedure and analytical techniques which are deployed have been described concisely in the Second Chapter.

Chapter III consists of the results and discussion on the effects of different vulcanization temperatures (150° - 180°C) on technological properties of gum natural rubber vulcanizates.

Chapter IV deals with high temperature curing in binary accelerator systems (MDB-TMTD and MDB-CBS).

In Chapter V we have studied the effects of curing temperature on the kinetics of crosslinking and network structure in both unaccelerated and accelerated vulcanization systems.