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CONCLUSION AND SUGGESTIONS FOR FUTURE

DEVELOPMENTS

## 6.1 CONCLUSIONS :

- (1) When CLIIR percentage of the blend is increased, air impermeability of vulcanisates increase respectively.(Fig:9).
- (2) Ageing at high temperatures, tensile properties were shown better when CLIIR is increased respectively.(Fig:3).
- (3) Ageing at 120°C for two days 300% modulus increases with increasing CLIIR percentage.(Fig:4).
- (4) Ageing at 120°C three days and 120°C one day, elongation at break is higher, in 80/20 (NR/CLIIR) blend.(Fig:5).
- (5) Ageing at 120°C three days, Tear strength is found to increase with increasing CLIIR in the blend.
- (6) Work cost up to the compounding stage also increased when CLIIR percentage is increased in the blend as follows.

	100/0	90/10	80/20	70/30	60/40
WORK COST OF 1kg(Rs)	33.18	36.16	39.14	42.14	45.11

- (7) Of the accelerators systems investigated for the 80/20 (NR/CLIIR) blend, following two accelerators systems showed better properties compared to other systems (described in Cha.5).

System	(1)	(2)
S	0.9	0.2
TMTD	0.2	-
TBBS	1.3	-
TMTM	-	0.4
MOR	-	1.5

Table:(17) -Proposed accelerators system for 80/20 (NR/CLIIR) blend.

## 6.2. SUGGESTIONS FOR FUTURE DEVELOPMENTS :

- (1) Due to the limited time and facilities it was not possible to determine some important processing properties, such as die swell. This is of vital importance for tube manufacture.
- (2) Tests for air permeability have been conducted only at room temperature. Air permeability should also be investigated at higher temperature i.e, temperature to which the tyre can get heated.
- (3) The creep test for vulcanisate of blends of NR/CIIR is also important, it gives an idea of the extension of tube. This defect is presently encountered in 'Kelani Tube'.
- (4) To find the suitability of the blend of NR/CIIR, splicing of tube sleeves before vulcanising should be studied. The splicing temperature and pressure should also be investigated.
- (5) In the case of fixing valve to the tube before vulcanising, valve cement should be studied to get the proper bonding of valve base and the tube.
- (6) It is suggested that the S.L.T.C. should service test inner tubes produced using the formulation EX-2 and accelerator system 1 or 4, before commencing serial production.

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