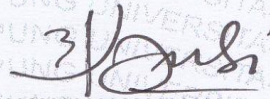


**MENGESAHKAN**

**1. Tim Penguji**

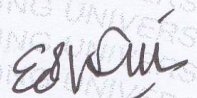
**Ketua**

**: Dr. Ahmad Saudi Samosir, S.T., M.T.**



**Sekretaris**

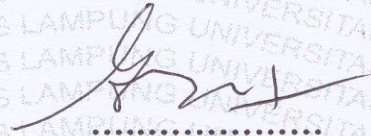
**: Dr. Eng. Endah Komalasari, S.T., M.T.**



**Penguji**

**Bukan Pembimbing**

**: Ir. Abdul Haris, M.T.**



**2. Dekan Fakultas Teknik**



**Prof. Suharno, M.Sc., Ph.D.**

**NIP 19620717 198703 1 002**



**Tanggal Lulus Ujian Skripsi : 31 Maret 2015**