

Appendix 4

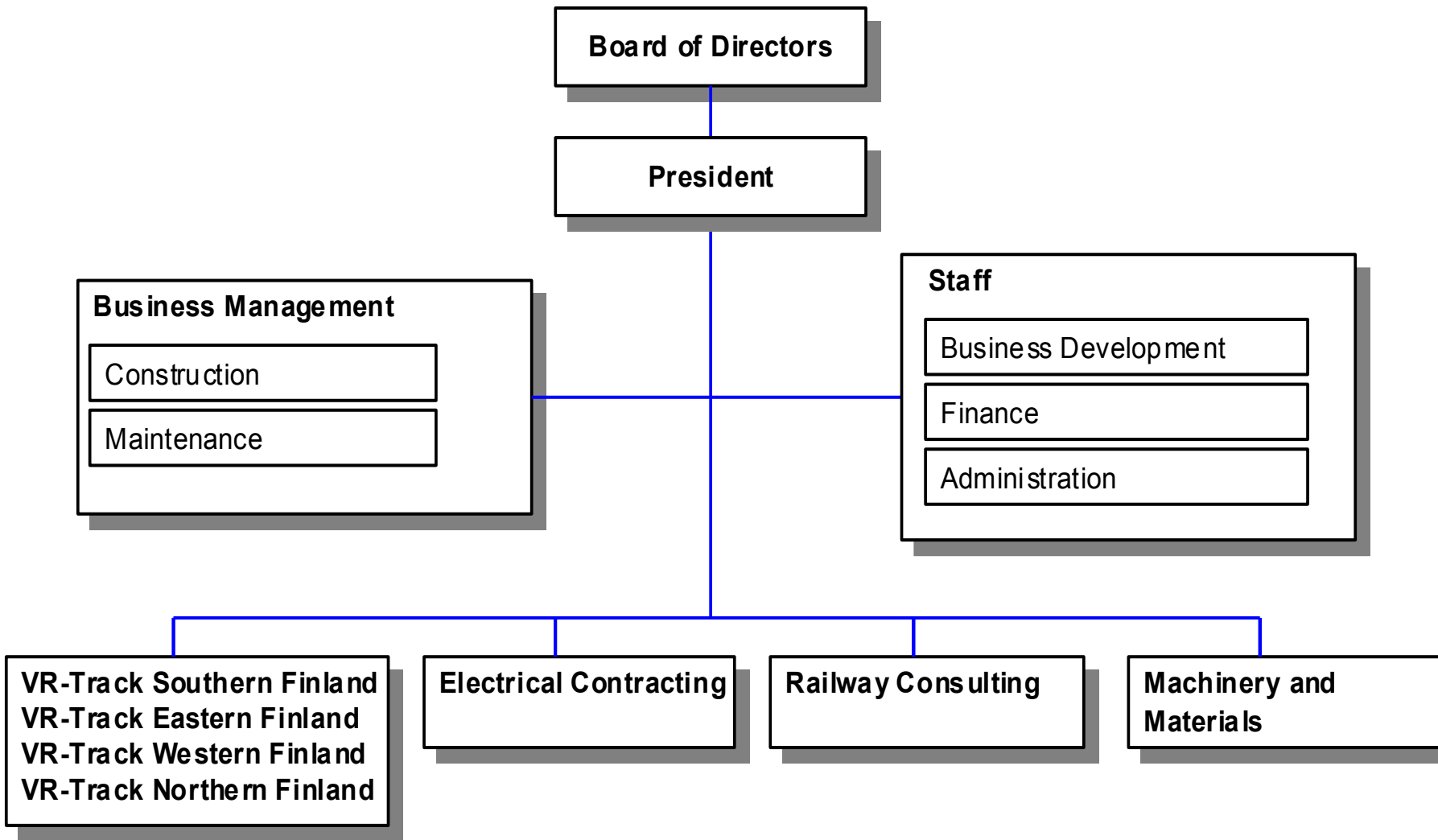
Rail Welding in Finland

Markku Melamies

VR Track Ltd

Rail Welding Services

VR-Track Ltd



VR-Track Ltd Work Machines and Logistics Services

Work Machines and Logistics Services

Arto Kukkola

- Work Machines Services
- Logistics Services
- Expertise and Support Services

Logistics Services

Ari Vepsäläinen

Stores:

South Finland Juhani Kataja

West Finland Ilpo Salonen

East Finland Matti Nikunen

North Finland Jouni Uimarihuhta

Rail Welding Services

Markku Melamies

- Production Plant
Kaipiainen
- Training Plant
Hyvinkää

Work Machines Arto Kukkola

- Work Machine Purchases and Maintenance
Veikko Noranta
- Work Machines Management
Tapani Saarinen
- Automobiles Fleet
Jussi Seppä

Impregnation Plant Erkki Salmi

Sleepers Store Markku Intke

Track Inspection Services Kari Koskinen

Points and Switches Production

Jari Pollari

- Points and Switches Assembly
Pieksämäki Pertti Pulliainen
- Points and Switches Assembly
Kaipiainen Erkki Töyry

Training of the welders

Basic training is in 4 parts

- I plate welding (arc welding) (14 days)
- II plate welding and using of gas methods (14 days)
- III welding of the rail steel (14 days)
- IV welding of the turn out components (14 days)

Further training for joint welding methods

- arc welding (14 days)
- aluminothermic welding (SoWoS)(9 days)

Special trainig for

- welding foreman (9 days)
- welding technician (10 days)

Approved welding methods

Methods with additives for joints

- aluminothermic welding processes

 - SoWoS (ET), most used

 - SoWoS - P

 - Skv

- Electric arc welding by welding rods

Methods without additives for joints

- Stationary flash butt welding on fixed plant

- Mobile flash butt welding

Methods for repair welding (surface welding)

- Electric arc welding by welding rod (or filling yarn)