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22 February 2011

CONCEPT DESIGN

STS Freight Mounted Transport System with the capacity of 100 million tons per annum

Part 2. STS 103 Freight Mounted Transport System

Concept Note

103-000000010CN



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1 Introduction

1.1 Name, Designation, Field of Application and Development Purpose

Name: STS Freight Mounted Transport System for iron ore haulage (hereinafter referred to as STS 103 Transport System).

Designation: 103-000000010.

Field of application: small- and middle lump iron ore transportation at a distance of 5000 km in conditions of Australia.

Development purpose: design and technological solutions development, specification of certain characteristics to be used in development of freight transport system for iron ore haulage.

1.2 Development Basis

The basis for the development of STS 103 freight transport system is Master Services Agreement — Exhibit A — Statement of Work No. 002, dated 14.08.2010 concluded between String Technologies Unitsky Pty Ltd ACN 144 498 251 and String Transport Systems Limited ACN 142 651 812.

1.3 Customer

String Transport Systems Limited, ACN 142 651 812 , Australia.

2 STS 103 General Description

STS 103 transport system consists of

- rolling stock;
- track structure;
- electric equipment;

- power supply system;
- depot;
- loading terminal;
- unloading terminal.

The following versions of transport system rolling stock were worked out:

- locomotive with hydromechanical and electromechanical transmissions;
- freight wagon made as:
 - a) freight module;
 - b) hopper;
 - c) dumpcar.

The following versions of unloading terminal were worked out:

- terminal with rotary dumper;
- terminal for hopper and dumpcar.

Structural arrangement of STS 103 with different rolling stocks and unloading terminals is represented in Fig.1.

General arrangement of STS 103 transport system is represented in Fig. 2, 3 and 4, the specifications of STS 103 are listed in Tab. 1.

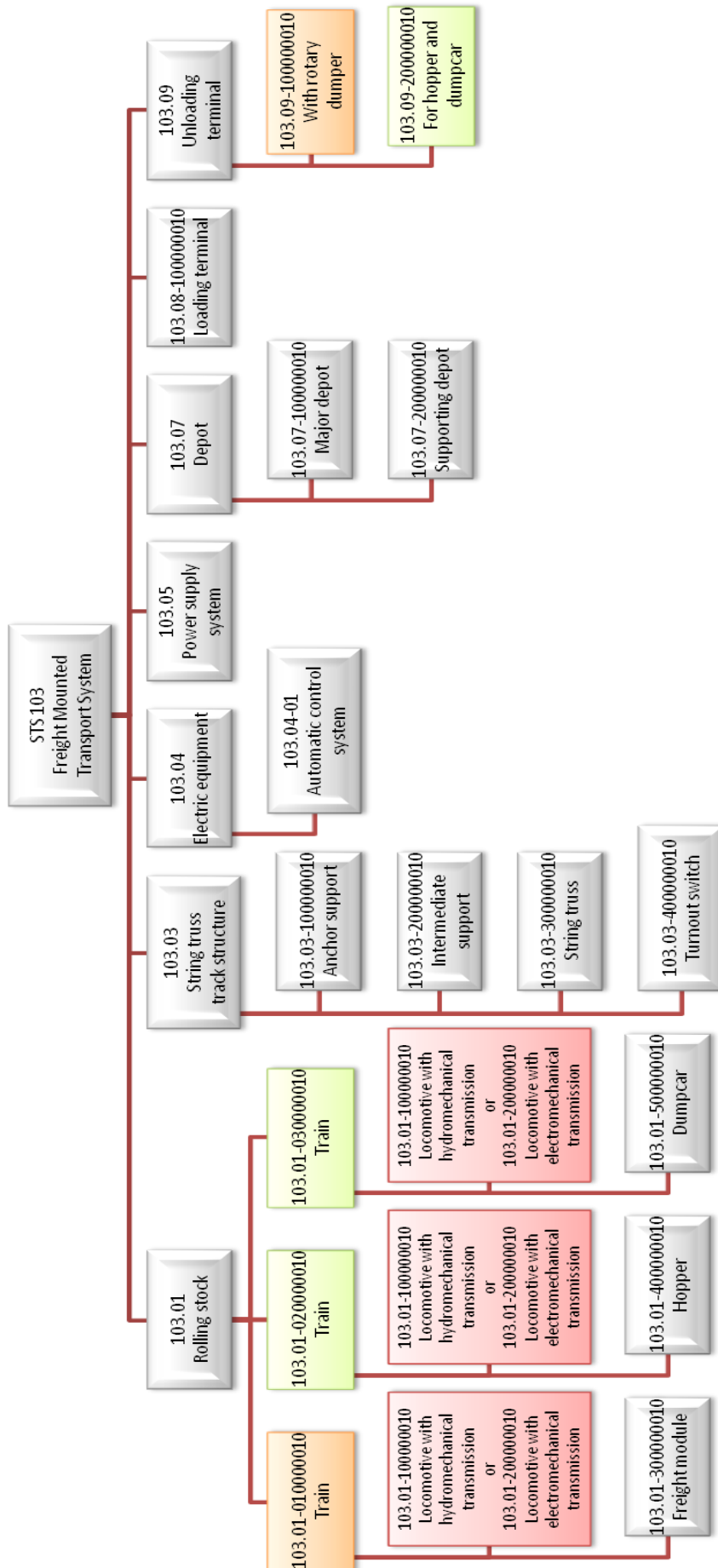


Fig. 1. STS 103 structural arrangement



Fig. 2. STS 103 Transport system



Fig. 3. STS 103 Transport system – loading of ore to the trains



Fig. 4. STS 103 Transport system – unloading of ore in the sea port