

## Appendix B: Product Groups

### Principles:

0. Definitions are defined in RISAS001/01 e.g. **Products** are **materials** (M) and **services** (S); the scope of RISAS is limited to **Critical Products**
1. **Product Groups** should be identified down to the same level of granularity that procurers actually buy them – and in such a way that they can find them when they search the IT Application
2. For **materials**, RISAS is designed to address the assurance requirements for overhauled materials and where necessary manufacture of components required to complete the overhaul e.g. wheel pans. Overhaul means activities largely, but not exclusively undertaken on systems, sub-systems and components off the vehicle and includes repair, but not running maintenance which is classified as a service.
3. For **services**, RISAS is currently limited to services which are sufficiently common to be worth using the RISAS process and which are not covered by other approval mechanisms
4. Product Groups should be **granular** enough for individual Suppliers to be passed out in whole Product Groups (at Levels 1, 2 or 3), rather than parts of Product Groups, although there may be caveats around the inclusion/ exclusion of software elements. NB Level 1 includes all/ any Level 2 and 3 beneath it; Level 2 includes all/ any Level 3 beneath it.
5. Product Groups should be **structured** enough for RISABs and their staff to be passed out in aggregated Product Groups (up at Level 1 or 2), rather than requiring an over-complicated competency recording regime
6. This list is **not** intended to be **exhaustive**; however it is not certain that RISAS will want to extend every Product Group listed. The intention is that this list is a reasonable start point, indicating Product Groups likely to be worth including in RISAS. It is also the intention that this list may be updated in future, not to itemise every nuance, but only where new or different competencies are required.
7. Where a symbol (such as #) appears after a Product Group, it indicates that it is identical to another Product Group. Hence a supplier certificated for example in **M2D1**, is also certificated in **M2C9**.

## M: MATERIALS CRITICAL PRODUCT GROUPS

### M01 Running Gear

#### A Wheelsets

0006	Trailer Wheelsets
0008	Powered Wheelsets

#### B Wheelset Components

0007	Axlebox bearings
0520	Axels
0521	Axleboxes #
0522	Brake Discs
0523	Gearwheels #
0524	Monobloc Wheels
0525	Resilient Wheel Units
0526	Suspension Tubes #
0527	Wheel Centres & Tyres

#### C Bogie Components

0528	Bolsters / Spring Planks
0529	Cast Bogie Frames
0530	Earth & Traction Return Brush gear #
0531	Fabricated Bogie Frames
0532	Lifeguards
0533	Riveted Bogie Frames
0534	Swing Links / Torque Links

#### D Suspension Components

0010	Springs - coil
0011	Springs - air
0012	Springs - rubber
0013	Springs - leaf
0521	Axleboxes #
0535	Anti-roll bars
0536	Bogie centre pivot
0537	Dampers - friction
0538	Dampers - hydraulic
0539	Side bearers

## M02 Brakes and Pneumatics

### A Apply forces to wheels

0022	Actuators - pneumatic & spring
0023	Actuators - hydraulic
0024	Slack adjustors
0166	Brake cylinders
0167	Callipers
0169	Scrubber actuators
0540	Brake Mechanical Linkage

### B Air - production, storage, treatment

0025	Reservoirs
0026	Compressors - reciprocating
0027	Compressors - screw
0170	Compressors - vane
0172	Safety valves
0174	Pressure gauge
0175	Pressure switches
0176	Air supply hoses
0177	Filters
0182	Air driers
0183	Oil separators
0541	Valves (not safety)
0773	Cocks including isolating and coupling

### C Brake Control

0046	Brake controllers
0047	Power/brake controllers #
0048	Brake control units - pneumatic only
0118	Tripcocks #
0184	Brake control units - Electro pneumatic
0185	Brake control units - electronic
0186	Distributors
0192	Handbrake control
0193	Parking brake control unit
0199	Pressure balance switch
0542	Electro pneumatic valves #
0543	Hydraulic parking brake control unit
0544	passenger communication device pneumatic
0545	Pneumatic Relays

0546 Pneumatic Valves

**D Slide and slip control**

0202 Tachometers

0203 Sanding control

0205 WSP control

0542 Electro pneumatic valves #

0547 Sanding delivery equipment

**M03 T&RS Mechanical Equipment**

**A Buffers**

0548 Buffers - hydraulic

0549 Buffers - metalastic

0550 Buffers - spring

**B Couplers**

0038 Bar couplers

0039 Automatic couplers

0040 Semi-automatic couplers

0041 Screw coupling

0551 Shackle

**C Drawgear**

0552 Collapse Unit

0553 Drawgear springs/side rubber

0554 Drawgear units

0555 Retraction Mechanism

**D Gangways**

0043 Gangways

**E Mechanical Components**

0557 Locking/Retention Devices for loads

**M04 T&RS Electrical Equipment**

**A Cells & batteries**

0054 Cells & batteries

**B Electrical Equipment**

0057 Battery chargers

0058	Amplifiers
0197	Electrical Relays
0558	Auxiliary Contactors and switchgear
0559	Auxiliary convertor
0560	Lighting Convertor

**C Intercar connections**

0059	Jumpers
0561	Autocoupler connectors and electrical heads

**D HVAC**

0060	Air conditioning units
0061	Heaters
0062	Fans #

**M05 T&RS electric traction equipment**

**A Transformers etc**

0070	Transformers
0071	Buchholz relays
0562	Oil Pumps #

**B Traction switchgear & equipment**

0072	Dc Traction Switchgear and Camshafts
0073	Ac Traction Switchgear and Tapchangers
0563	Resistor grids

**C Static Converters**

0074	Traction Converters and Inverters
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**D Power circuits**

0075	Power circuit breakers
0076	Surge arrestors
0564	Capacitors
0565	Chokes

**E Rotating machines**

0062	Fans #
0077	Traction motors
0078	Dynamos & generators
0079	Alternators & MA sets
0080	Starter motors for diesel engines

## **F Collection equipment**

0082	Pantographs
0083	Shoegear
0530	Earth & Traction Return Brush gear #

## **M06 T&RS diesel traction equipment**

### **A Diesel engines & components**

0089	Diesel engines
0090	Governors
0091	Turbochargers
0092	Cylinder heads & liners
0093	Power packs
0131	Fuel Injection Equipment

### **B Cooler groups & radiators**

0566	Hydrostatic
0567	Oil Cooler
0568	Radiators
0569	Thermostats

### **C Fuel and oil systems**

0095	Fuel tanks
0096	Low pressure Fuel pumps
0562	Oil Pumps #
0570	Filling valves and couplings
0571	Fuel hoses

### **D Exhaust systems**

0097	Exhaust Systems
0572	After Treatment

## **M07 T&RS Transmission**

### **A Gearboxes (Mechanical transmission)**

0103	Gearboxes (mechanical transmission)
0523	Gearwheels #
0562	Oil Pumps #
0573	Bearings #
0574	Final Drives
0575	Fluid Couplings/Torque Convertors

0576	Other Gearboxes
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### **B Gearcases (Electrical transmission)**

0104	Gearcases (electrical transmission)
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0523	Gearwheels #
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0526	Suspension Tubes #
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0562	Oil Pumps #
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0573	Bearings #
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### **C Drive equipment**

0105	Cardan Shafts
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0106	Flexible Couplings
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0577	Quill Tubes
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0578	Transmission Safety Device
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## **M08 Trainborne safety/ monitoring equipment**

### **A Train Control**

0047	Power/brake controllers #
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0113	Automatic Warning System
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0114	Train Protection & Warning System
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0115	Automatic Train Protection
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0116	Radio Electronic Tokenless Block
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0117	Driver's Safety Device/Vigilance
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0118	Tripcocks #
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0579	Drivers Controller
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0580	Emergency Passenger Communication Device
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0581	ETCS/ERTMS
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0582	Radar
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0583	Tilt Authority & Speed Supervision
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### **B Data recording & communications**

0119	Speedometers
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0121	Passenger Information Systems
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0122	Train Management Systems
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0123	Closed Circuit TV systems
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0584	Data Recorders including OTMR
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### **C Radios**

0124	Cab Secure Radio
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0125	National Radio Network
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0126	Global System for Mobile Communications - Railway
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**D Train Detection**

0127 Track Circuit Actuator

0128 Horns

**E Fire System**

0129 Fire Detection

0130 Fire Suppression

**M09 Doors and Windscreen Equipment****A Powered Doors**

0136 Door Header kit

0137 Door Control Unit

0585 Door control equipment (access / egress devices)

0586 Door leaves #

**B Manually Operated Doors**

0138 Central Door Locking

0139 Doorlocks &amp; handles

0586 Door leaves #

0587 Droplights

**C Windscreen Wiper/Washer Equipment**

0140 Wiper/ washer motors

0141 Wiper arms

0588 Wiper Blades

**M10 Interiors****A Cab Equipment**

0591 Cab back partition doors (including Burst Through)

0592 Headlamps

0593 Horn Operation

0594 Seats

**B Fixtures and Fittings**

0596 Draughtscreens

0597 Lighting

0598 Luggage Racks

0599 RVAR / PRM - Access devices

0600 Saloon Doors (inc Emergency Break Through)

0601	Seats
0602	Tables
<b>C Catering Facility</b>	
0604	Catering Equipment
0605	Drainage
0606	Extraction (local & not via HVAC)
0607	Water supply (potable)
<b>E Toilets</b>	
0609	CET
0610	Doors
0611	Extraction (Local or via HVAC)
0612	Hand Driers
0613	Vacuum
0614	Waste Treatment Drainage/ Retention
0615	Water supply (non-potable)

## S: SERVICES PRODUCT GROUPS

Notes on the approach:

A number of potential product groups have been excluded, such as:

- Breakdown and recovery services – these contracts are again likely to be unique on each occasion
- Calibration – on the grounds that UKAS runs a perfectly good approval scheme: the railway industry doesn't need a special one
- NoBos / VABs and things that NoBos / VABs do – NoBos / VABs are themselves the product of an approval scheme
- Services that are part of a Duty Holder's Safety Management System (SMS) – these are intrinsically tied up with how each SMS is written, where scope boundaries are drawn etc - e.g. audit services, competency assessments, hire of labour under the direction and control of the Duty Holder, Hire of plant, Hire of Rail Vehicles

Hence the current list of **Services Product Groups**

<b>S01A Procurement of Maintenance / Repair</b>	
<b>A Maintenance / Repair</b>	
0618	Servicing
0619	Simple Maintenance & Repairs

**S01B Procurement of Vehicle System Maintain & Overhaul**

**A Air (Not Brakes) – Maintenance and Overhaul**

0622 Full Maintenance & Repair

0623 Overhaul Only

**B Brakes – Maintenance and Overhaul**

0625 Full Maintenance & Repair

0626 Overhaul Only

**C Bodywork (Exterior) – Maintenance and Overhaul**

0628 Full Maintenance & Repair

0629 Overhaul Only

**D Diesel Engine - Maintenance and Overhaul**

0631 Full Maintenance & Repair

0632 Overhaul Only

**E Battery / Control - Maintenance and Overhaul**

0634 Full Maintenance & Repair

0635 Overhaul Only

**F Floors - Maintenance and Overhaul**

0637 Full Maintenance & Repair

0638 Overhaul Only

**G Current Collection - Maintenance and Overhaul**

0640 Full Maintenance & Repair

0641 Overhaul Only

**H HVAC - Maintenance and Overhaul**

0643 Full Maintenance & Repair

0644 Overhaul Only

**I Interior (Not Toilets) - Maintenance and Overhaul**

0646 Full Maintenance & Repair

0647 Overhaul Only

**K Catering - Maintenance and Overhaul**

0649 Full Maintenance & Repair

0650 Overhaul Only

**L Oil & Fuel - Maintenance and Overhaul**

0652 Full Maintenance & Repair

0653 Overhaul Only

**M Electrical Machines - Maintenance and Overhaul**

0655 Full Maintenance & Repair

0656 Overhaul Only

**N Hydrostatics - Maintenance and Overhaul**

0658 Full Maintenance & Repair

0659 Overhaul Only

**O Doors - Maintenance and Overhaul**

0661 Full Maintenance & Repair

0662 Overhaul Only

**P Electrical Traction Power - Maintain and Overhaul**

0664 Full Maintenance & Repair

0665 Overhaul Only

**Q Cooling - Maintenance and Overhaul**

0667 Full Maintenance & Repair

0668 Overhaul Only

**S Safety System - Maintenance and Overhaul**

0670 Full Maintenance & Repair

0671 Overhaul Only

**T Transmission - Maintenance and Overhaul**

0673 Full Maintenance & Repair

0674 Overhaul Only

**U Underframe & Couplers - Maintenance and Overhaul**

0676 Full Maintenance & Repair

0677 Overhaul Only

**W Toilets - Maintenance and Overhaul**

0679 Full Maintenance & Repair

0680 Overhaul Only

**Z Fire & Emergency - Maintenance and Overhaul**

0682 Full Maintenance & Repair

0683 Overhaul Only

**S01C Procurement of vehicle Milage based overhaul**

**Vehicle Milage based overhaul**

0145 C4 type overhaul procurement

**S01D Procurement of vehicle Time based overhaul**

**Vehicle Time based overhaul**

0146 C6 type overhaul

**S01E Procurement of Vehicle System Modification**

**A Air (Not Brakes) – Turnkey**

0686 Design

0687 Labour

0688 Materials

**B Brakes – Turnkey**

0690 Design

0691 Labour

0692 Materials

**C Bodywork (Exterior) – Turnkey**

0694 Design

0695 Labour

0696 Materials

**D Diesel Engine – Turnkey**

0698 Design

0699 Labour

0700 Materials

**E Battery / Control – Turnkey**

0702 Design

0703 Labour

0704 Materials

**F Floors – Turnkey**

0706 Design

0707 Labour

0708 Materials

**G Current Collection – Turnkey**

0710	Design
0711	Labour
0712	Materials

**H HVAC – Turnkey**

0714	Design
0715	Labour
0716	Materials

**I Interior (Not Toilets) – Turnkey**

0718	Design
0719	Labour
0720	Materials

**K Catering – Turnkey**

0722	Design
0723	Labour
0724	Materials

**L Oil & Fuel – Turnkey**

0726	Design
0727	Labour
0728	Materials

**M Electrical Machines – Turnkey**

0730	Design
0731	Labour
0732	Materials

**N Hydrostatics – Turnkey**

0734	Design
0735	Labour
0736	Materials

**O Doors – Turnkey**

0738	Design
0739	Labour
0740	Materials

**P Electrical Traction Power – Turnkey**

0742	Design
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0743	Labour
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0744	Materials
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#### **Q Cooling – Turnkey**

0746	Design
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0747	Labour
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0748	Materials
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#### **S Safety System – Turnkey**

0750	Design
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0751	Labour
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0752	Materials
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#### **T Transmission – Turnkey**

0754	Design
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0755	Labour
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0756	Materials
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#### **U Underframe & Couplers (inc Bogies) – Turnkey**

0758	Design
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0759	Labour
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0760	Materials
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#### **W Toilets – Turnkey**

0762	Design
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0763	Labour
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0764	Materials
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#### **Z Fire & Emergency – Turnkey**

0766	Design
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0767	Labour
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0768	Materials
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### **S02 Spares Management and Logistics**

#### **A Procurement**

0151	Procurement
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#### **B Storage**

0152	Storage
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#### **C Transport**

0153	Transport
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### S03 Scientific Services

#### A Materials Assessment

0159 Materials assessment

#### B Surface Coatings

0160 Surface coatings

#### C Oil/ water analysis

0161 Oil/ water analysis

#### D Metallurgical Analysis

0162 Metallurgical analysis

### S04A Delivery of vehicle maintenance/repair

#### Simple Maintenance & Repairs

0358 Simple Maintenance & Repairs

0360 Servicing

### S04B Delivery of vehicle System Maintenance & Overhaul

#### A Air (Not Brakes) – Maintenance and Overhaul

0363 Full Maintenance & Repair

0364 Overhaul Only

#### B Brakes – Maintenance and Overhaul

0366 Full Maintenance & Repair

0367 Overhaul Only

#### C Bodywork (Exterior) - Maintenance and Overhaul

0369 Full Maintenance & Repair

0370 Overhaul Only

#### D Diesel Engine - Maintenance and Overhaul

0372 Full Maintenance & Repair

0373 Overhaul Only

#### E Battery / Control - Maintenance and Overhaul

0375 Full Maintenance & Repair

0376 Overhaul Only

**F Floors - Maintenance and Overhaul**

0378 Full Maintenance &amp; Repair

0379 Overhaul Only

**G Current Collection - Maintenance and Overhaul**

0381 Full Maintenance &amp; Repair

0382 Overhaul Only

**H HVAC - Maintenance and Overhaul**

0384 Full Maintenance &amp; Repair

0385 Overhaul Only

**I Interior (Not Toilets) - Maintenance and Overhaul**

0387 Full Maintenance &amp; Repair

0388 Overhaul Only

**K Catering - Maintenance and Overhaul**

0390 Full Maintenance &amp; Repair

0391 Overhaul Only

**L Oil & Fuel - Maintenance and Overhaul**

0393 Full Maintenance &amp; Repair

0394 Overhaul Only

**M Electrical Machines - Maintenance and Overhaul**

0396 Full Maintenance &amp; Repair

0397 Overhaul Only

**N Hydrostatics - Maintenance and Overhaul**

0399 Full Maintenance &amp; Repair

0400 Overhaul Only

**O Doors Maintenance and Overhaul**

0402 Full Maintenance &amp; Repair

0403 Overhaul Only

**P Electrical Traction Power - Maintenance and Overha**

0405 Full Maintenance &amp; Repair

0406 Overhaul Only

**Q Cooling - Maintenance and Overhaul**

0408 Full Maintenance &amp; Repair

0409 Overhaul Only

**S Safety System - Maintenance and Overhaul**

0411 Full Maintenance &amp; Repair

0412 Overhaul Only

**T Transmission - Maintenance and Overhaul**

0414 Full Maintenance &amp; Repair

0415 Overhaul Only

**U Underframe & Couplers (inc Bogies) - Maintenance a**

0417 Full Maintenance &amp; Repair

0418 Overhaul Only

**W Toilets - Maintenance and Overhaul**

0420 Full Maintenance &amp; Repair

0421 Overhaul Only

**Z Fire & Emergency - Maintenance and Overhaul**

0423 Full Maintenance &amp; Repair

0424 Overhaul Only

**S04C Delivery of vehicle Mileage Based Overhaul****C4**

0427 C4 type overhaul delivery

**S04D Delivery of vehicle Time Based Overhaul****C6**

0430 C6 type overhaul delivery

**S04E Delivery of vehicle System Modification****A Air (Not Brakes) – Turnkey**

0433 Design

0434 Materials

0435 Labour

**B Brakes – Turnkey**

0437 Design

0438 Materials

0439 Labour

**C Bodywork (Exterior) - Turnkey**

0441 Design

0442 Materials

0443 Labour

**D Diesel Engine - Turnkey**

0445 Design

0446 Materials

0447 Labour

**E Battery / Control - Turnkey**

0449 Design

0450 Materials

0451 Labour

**F Floors - Turnkey**

0453 Design

0454 Materials

0455 Labour

**G Current Collection - Turnkey**

0457 Design

0458 Materials

0459 Labour

**H HVAC - Turnkey**

0461 Design

0462 Materials

0463 Labour

**I Interior (Not Toilets) - Turnkey**

0465 Design

0466 Materials

0467 Labour

**K Catering - Turnkey**

0469 Design

0470 Materials

0471 Labour

**L Oil & Fuel - Turnkey**

0475 Design

0476	Materials
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0477	Labour
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**M Electrical Machines - Turnkey**

0479	Design
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0480	Materials
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0481	Labour
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**N Hydrostatics - Turnkey**

0483	Design
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0484	Materials
------	-----------

0485	Labour
------	--------

**O Doors - Turnkey**

0487	Design
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0488	Materials
------	-----------

0489	Labour
------	--------

**P Electrical Traction Power - Turnkey**

0491	Design
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0492	Materials
------	-----------

0493	Labour
------	--------

**Q Cooling - Turnkey**

0495	Design
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0496	Materials
------	-----------

0497	Labour
------	--------

**S Safety System - Turnkey**

0499	Design
------	--------

0500	Materials
------	-----------

0501	Labour
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**T Transmission - Turnkey**

0503	Design
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0504	Materials
------	-----------

0505	Labour
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**U Underframe & Couplers (inc Bogies) - Turnkey**

0507	Design
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0508	Materials
------	-----------

0509	Labour
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**W Toilets - Turnkey**

0513 Design

0514 Materials

0515 Labour

**Z Fire & Emergency - Turnkey**

0517 Design

0518 Materials

0519 Labour