18/12/2014

18/12/2014

Numéro et Nom	traces to
26.3.13.1 Introduction 3.13	
26.3.13.1.1 Definition of speed and distance monitoring	No tracability
26.3.13.1.2 Limit of responsability	No tracability
26.3.13.1.3 Overview	No tracability
26.3.13.1.4 Definition of d	No tracability
26.3.13.2 Inputs for speed and distance monitoring	
26.3.13.2.1 Introduction 3.13.2	No tracability
26.3.13.2.2 Train related inputs	
26.3.13.2.2.1 Introduction 3.13.2.2	
26.3.13.2.2.1.1 List of train related inputs	EI.4.1 A_est (loc/)(stp1)
	EI.4.8 V_est (loc/)(stp2)
26.3.13.2.2.1.2 Acquisition of train related inputs	
26.3.13.2.2.1.3 Acquisition of braking models	
26.3.13.2.2.2 Traction model	EI.3.2.4 A_traction (tr/)
	EI.3.2.15 T_traction_cut_off (tr/)(stp3)
26.3.13.2.2.3 Braking Models	
26.3.13.2.2.3.1 Speed Dependent Deceleration	FT.1.4.3 Calculate expected deceleration (step 3)
	FT.1.4.3.1 Select deceleration of service brake model (step 3)
	FT.1.4.4 Calculate normal service brake deceleration (step 4)
	El.3.2.1 A_brake_emergency models (V) (tr/)(stp3)
	El.3.2.2 A_brake_normal_service m. (V) (tr/)(stp4)
	El.3.2.3 A brake service models (V) (tr/)(stp3)
26.3.13.2.2.3.2 Brake build up time	El.3.2.13 T_brake_emergency values (tr/)(stp3)
	El.3.2.14 T brake service values (tr/)(stp3)
26.3.13.2.2.4 Brake Position	EI.1.2 Brake position (dr/)(stp3)
26.3.13.2.2.5 Brake Percentage	FT.1.4.2.2.2 Build brake percentage conversion model (step 3)
	FT.1.5.1.2 Build brake position model (step 3)

FT.1.5.5.1 Select T_brake_emergency value (step 3)
EI.1.1 Brake percentage (dr/)(stp3)
FT.1.4.2.2.6 Calculate emergency brake deceleration (step 3)
FT.1.4.3.1 Select deceleration of service brake model (step 3)
FT.1.5.1.1 Select T_brake_service value (step 3)
FT.1.5.5.1 Select T_brake_emergency value (step 3)
EI.3.2.11 Special brakes status (tr/)(stp4)
No tracability
No tracability
FT.1.4.2.2.2 Build brake percentage conversion model (step 3)
FT.1.4.2.2.7 Calculate safe emergency brake deceleration - Train Data (step 3)
El.3.2.5 Kdry_rst Kwet-rst RollStkCorr (tr/)(stp3)
El.3.2.6 Kn+(V) and Kn-(V) CorrGrdt(V)(tr/)(stp4)
EI.3.2.8 M_rotating_nom (tr/)(stp3)
EI.3.2.7 L_TRAIN Train length (tr/)(stp3)
EI.3.1.1 Compensation (trfv/)
EI.3.1.2 dV_ebi_max (trfv/) (stp1)
EI.3.1.3 dV_ebi_min (trfv/) (stp1)
EI.3.1.4 dV_sbi_max (trfv/) (stp1)
EI.3.1.5 dV_sbi_min (trfv/) (stp1)
EI.3.1.6 dV_warning_max (trfv/) (stp1)
EI.3.1.7 dV_warning_min (trfv/) (stp1)
EI.3.1.8 M_rotating_max (trfv/)(stp3)
EI.3.1.9 M_rotating_min (trfv/)(stp3)
EI.3.1.10 T_driver (trfv/)(stp2)
EI.3.1.11 T_preindication (trfv/)(stp2)

18/12/2014

26.3.13.2.2.13	Maximum train speed
	rackside related inputs
	Introduction 3.13.2.3 List of inputs
26.3.13.2.3.2	Trackside related speed restrictions
26.3.13.2.3.3	Gradients
26.3.13.2.3.4	Track conditions
26.3.13.2.3.5	Reduced adhesion conditions

EI.3.1.13 V_ebi_max (trfv/)
EI.3.1.14 V_ebi_min (trfv/)
EI.3.1.15 V_sbi_max(trfv/)
EI.3.1.16 V_sbi_min (trfv/)
EI.3.1.17 V_warning_max (trfv/)
EI.3.1.18 V_warning_min (trfv/)
FT.1.1.1 Calculate the Most Restrictive Speed Profile (stp1)
EI.3.2.9 Maximum train speed (tr/)(stp3)
EI.2.2.22 V_NVREL (tk/)(stp1)
FT.1.1.1 Calculate the Most Restrictive Speed Profile (stp1)
EI.2.3.1 ASP Axle load Speed Profile (tk/)
EI.2.3.2 BBD SR (tk/)
EI.2.3.3 LX SR Level Crossing speed restriction (tk/)
EI.2.3.4 Mode related Speed Restriction (tk/)
EI.2.3.5 Override ftrelated Speed Restrict. (tk/)
EI.2.3.6 Signalling related speed restriction (tk/)
EI.2.3.7 SSP Static Speed Profile (tk/)
EI.2.3.8 STM Max speed (tk/)
EI.2.3.9 STM System speed (tk/)
EI.2.3.10 TSR Temporary Speed Restrict. (tk/)
EI.2.1.4 Default gradient for TSR (tk/)(stp3)
EI.2.1.5 Gradient profile (tk/)(stp3)
EI.2.1.6 Inhibition of eddy current brake (tk/)
EI.2.1.7 Inhibition of magnetic shoe brake (tk/)

EI.2.1.8 Inhibition of regenerative brake (tk/)

FT.1.4.1 Select adhesion factor (step 3)

EI.2.1.11 Powerless section (tk/)

18/12/2014

	EI.1.3 Slippery rail (dr/)(stp3)
	EI.2.1.1 Adhesion factor pck 71 (tk/)(stp3)
	Adhesion factor (a)
	Slippery rail (/dmi)
26.3.13.2.3.6 Specific speed / distance limits	EI.2.1.10 MA (tk/)(stp1)
	EI.2.2.6 D_NVSTFF (tk/)(stp3)
26.3.13.2.3.7 National Values for speed and distance monitoring	
26.3.13.2.3.7.1 Inhibition of the service brake command	EI.2.2.20 Q_NVSBTSMPERM (tk/)(stp3)
26.3.13.2.3.7.2 Emergency brake revocation	EI.2.2.14 Q_NVEMRRLS (tk/)
26.3.13.2.3.7.3 Inhibition of the Guidance Curve	EI.2.2.15 Q_NVGUIPERM (tk/)(stp2)
26.3.13.2.3.7.4 Inhibition of the service brake feedback	EI.2.2.19 Q_NVSBFBPERM (tk/)(stp3)
26.3.13.2.3.7.5 Dry rails	EI.2.2.9 M_NVEBCL (tk/)(stp3)
26.3.13.2.3.7.6 Wheel / rail adhesion	EI.2.2.8 M_NVAVADH (tk/)(stp3)
26.3.13.2.3.7.7 Maximum value of the speed dependent deceleration for the	EI.2.2.1 A_NVMAXREDADH1 (tk/)(stp3)
emergency brake	EI.2.2.2 A_NVMAXREDADH2 (tk/)(stp3)
	EI.2.2.3 A_NVMAXREDADH3 (tk/)(stp3)
26.3.13.2.3.7.8 Release speed	
26.3.13.2.3.7.9 Speed measurement inaccuracy	EI.2.2.16 Q_NVINHSMICPERM (tk/)(stp1)
26.3.13.2.3.7.10 Integrated correction factors	EI.2.2.4 A_NVP12 (tk/)(stp3)
	EI.2.2.5 A_NVP23 (tk/)(stp3)
	EI.2.2.7 L_NVKRINT (tk/)(stp3)
	EI.2.2.10 M_NVKRINT (tk/)(stp3)
	EI.2.2.11 M_NVKTINT (tk/)(stp3)
	EI.2.2.12 M_NVKVINT (tk/)(stp3)
	EI.2.2.17 Q_NVKVINTSET (tk/)(stp3)
	EI.2.2.21 V_NVKVINT (tk/)(stp3)
	Kr_int(L)
	Kt_int(stp3)

18/12	/2014
-------	-------

26.3.13.2.3.7.10.1 Kv_int(V) speed dependent factor 26.3.13.2.3.7.10.2 Kv int(I) length dependent factor 26.3.13.2.3.7.10.3 Brake factor 26.3.13.3 Conversion Models 26.3.13.3.1 Introduction 3.13.3 26.3.13.3.2 Applicability of the conversion models 26.3.13.3.3 Brake percentage conversion model 26.3.13.3.3.1 Input parameters 26.3.13.3.3.2 Calculation of the basic deceleration 26.3.13.3.3. Output parameters

 $Kv_{int}(V)$ EI.2.2.12 M_NVKVINT (tk/)(stp3) EI.2.2.17 Q NVKVINTSET (tk/)(stp3) EI.2.2.21 V_NVKVINT (tk/)(stp3) Kv int(V)FT.1.4.2.2.4 Determinate the speed / lenght dependent integrated correct. factor (stp3) EI.2.2.7 L_NVKRINT (tk/)(stp3) EI.2.2.10 M_NVKRINT (tk/)(stp3) Kr_int(L) EI.2.2.11 M NVKTINT (tk/)(stp3) Kt_int(stp3) EI.1.1 Brake percentage (dr/)(stp3) EI.1.2 Brake position (dr/)(stp3) FT.1.4.2.2.1 Are conversion model valid? FT.1.4.2.2.2 Build brake percentage conversion model (step 3) FT.1.4.3 Calculate expected deceleration (step 3) FT.1.4.4 Calculate normal service brake deceleration (step 4) FT.1.4.2.2.2 Build brake percentage conversion model (step 3) FT.1.4.3 Calculate expected deceleration (step 3) FT.1.4.4 Calculate normal service brake deceleration (step 4) FT.1.4.2.2.2 Build brake percentage conversion model (step 3) FT.1.4.3 Calculate expected deceleration (step 3) FT.1.4.4 Calculate normal service brake deceleration (step 4) FT.1.4.2.2.2 Build brake percentage conversion model (step 3) FT.1.4.3 Calculate expected deceleration (step 3) FT.1.4.4 Calculate normal service brake deceleration (step 4) A_brake_emergency (V)

18/12/2014			
26.3.13.3.4 Brake position conversion model	FT.1.5.1.2 Build brake position model (step 3)		
26.3.13.3.4.1 Input parameters 3.13.3.3	FT.1.5.1.2 Build brake position model (step 3)		
26.3.13.3.4.2 Calculation of the emergency brake equivalent time	FT.1.5.1.2 Build brake position model (step 3)		
26.3.13.3.4.3 Calculation of the full service brake equivalent time	FT.1.5.1.2 Build brake position model (step 3)		
26.3.13.3.4.4 Output parameters 3.13.3.4	FT.1.5.1.2 Build brake position model (step 3)		
	T_brake_emergency_cm0		
	T_brake_emergency_cmt		
	T_brake_service_cm0		
	T_brake_service_cmt		
26.3.13.4 Acceleration / Deceleration due to gradient	FT.1.4.2.1 Calculate acceleration / deceleration due to gradiant (step 3)		
26.3.13.4.1 Introduction 3.13.4	FT.1.4.2.1 Calculate acceleration / deceleration due to gradiant (step 3)		
26.3.13.4.2 Train length compensation	FT.1.4.2.1 Calculate acceleration / deceleration due to gradiant (step 3)		
26.3.13.4.3 Rotating mass	FT.1.4.2.1 Calculate acceleration / deceleration due to gradiant (step 3)		
	A_gradiant(d)		
26.3.13.5 Determination of locations without special brake contribution and	FT.1.4.1 Select adhesion factor (step 3)		
with reduced adhesion conditions	FT.1.4.2.2.6 Calculate emergency brake deceleration (step 3)		
	FT.1.4.3.1 Select deceleration of service brake model (step 3)		
26.3.13.6 Calculation of the deceleration and brake build up time			
26.3.13.6.1 Introduction 3.13.6	No tracability		
26.3.13.6.2 Emergency brake	FT.1.4.2 Calculate safe deceleration (step 3)		
26.3.13.6.2.1 Safe deceleration	FT.1.4.2 Calculate safe deceleration (step 3)		
	FT.1.4.2.2.3 Calculate maximal acceleration (step 3)		
	FT.1.4.2.2.4 Determinate the speed / lenght dependent integrated correct. factor (stp3)		
	FT.1.4.2.2.5 Calculate safe emergency brake deceleration - Convers. model (stp3)		
	FT.1.4.2.2.6 Calculate emergency brake deceleration (step 3)		
	FT.1.4.2.2.7 Calculate safe emergency brake deceleration - Train Data (step 3)		
	FT.1.4.2.3 Determine factor adhesion parameter (step 3)		

18/12/2014	
26.3.13.6.2.2 Safe brake build up time	FT.1.5.5 Calculate safe break build up time (step 3)
	FT.1.5.5.1 Select T_brake_emergency value (step 3)
	FT.1.5.5.2 Calculate safe break build up time - train data (step 3)
	FT.1.5.5.4 Calculate safe break build up time - conversion model (step 3)
26.3.13.6.3 Service brake	
26.3.13.6.3.1 Expected deceleration	FT.1.4.3 Calculate expected deceleration (step 3)
	FT.1.4.3.1 Select deceleration of service brake model (step 3)
	FT.1.4.3.3 Calculate the expected deceleration (step 3)
	FT.1.5.1.2 Build brake position model (step 3)
26.3.13.6.3.2 Expected brake build up time	FT.1.5.1 Calculate expected brake build up time (step 3)
	FT.1.5.1.1 Select T_brake_service value (step 3)
	FT.1.5.1.2 Build brake position model (step 3)
	FT.1.5.1.3 Calculate the expected brake build up time (step 3)
26.3.13.6.4 Normal service brake deceleration	FT.1.4.2.2.2 Build brake percentage conversion model (step 3)
	FT.1.4.4 Calculate normal service brake deceleration (step 4)
	FT.1.4.4.2 Calculate normal deceleration of service brake (step 4)
	FT.1.4.4.3 Calculate the normal service brake deceleration (step 4)
26.3.13.7 Determination of Most Restrictive Speed Profile (MRSP)	FT.1.1 Calculate Most Restrictive Speed Profile (out of prm)
	FT.1.1.1 Calculate the Most Restrictive Speed Profile (stp1)
26.3.13.8 Determination of targets and brake deceleration curves	
26.3.13.8.1 Introduction 3.13.8	List of Targets
	Target location
26.3.13.8.2 Determination of the supervised targets	FT.1.3.1 Determinate supervised targets (step 1)
26.3.13.8.3 Emergency Brake Deceleration curves (EBD)	FT.1.3.2 Determinate Emergency Brake Deceleration curves (step 1)
26.3.13.8.4 Service Brake Deceleration curves (SBD)	FT.1.3.3 Determine Service Brake Deceleration Curve (step 2)
26.3.13.8.5 Guidance curves (GUI)	FT.1.3.4 Determine Guidance Curves (step 4)
26.3.13.9 Supervision limits	FT.6 Supervision limits computation
26.3.13.9.1 Overview 3.13.9	FT.6 Supervision limits computation

18/12/2014	
26.3.13.9.2 Ceiling supervision limits	FT.1.2.1 Determine the ceiling supervision speeds (step 1)
26.3.13.9.3 Braking to target supervision limits	
26.3.13.9.3.1 Overview 3.13.9.3	FT.1.6 Determine braking to target supervision limits (step 1&2)
26.3.13.9.3.2 EBI supervision limit	FT.1.5.3 Calculate T_Traction (step 3)
	FT.1.5.4 Calculate T_berem (step 3)
	FT.1.6.2.1 Determine EBI= f(EBD) supervision limit (step 1)
26.3.13.9.3.3 SBI supervision limit	FT.1.3.1 Determinate supervised targets (step 1)
	FT.1.5.2 Calculate T_bs1 and T_bs2 (step 3)
	FT.1.6.1.1 Determine SBI1=f(SBD) supervision limit (step 2)
	FT.1.6.2.2 Determine SBI2 f(EBD) limit (step 1)
	FT.1.6.3 Determine FLOI-SBI limit in TSM (step 2)
26.3.13.9.3.4 Warning supervision limit (W)	FT.1.6.4 Determine Warning supervision limit (W) (step 2)
26.3.13.9.3.5 Permitted speed supervision limit (P)	FT.1.6.5 Determine Permitted speed supervision limit (P) (step 2)
26.3.13.9.3.6 Indication supervision limit (I)	FT.1.6.6 Determine Indication supervision limit (I) (step 2)
26.3.13.9.4 Release speed supervision limits	FT.1.7.1 Determine Release speed supervision limits 2
	FT.1.8 Join CSM, TSM and RSM curves and define type change location (step 1&2)
26.3.13.9.5 Pre-indication location	FT.1.6.7 Determine Pre-indication location (step 2)
26.3.13.10 Speed and distance monitoring commands	FT.7 Commands
26.3.13.10.1 Introduction 3.13.10	FT.2.1 CSM Ceiling speed monitoring
	FT.2.1.2.2 0 Normal status
	FT.2.1.2.3 1 Indication status
	FT.2.1.2.4 2 Overspeed status
	FT.2.1.2.5 3 Warning status
	FT.2.1.2.6 4 Intervention status
	FT.2.2 TSM Target speed monitoring
	FT.2.3 RSM Release speed monitoring
	FX.2.1 Traction Cut Off (TCO) (/tr)(stp1)
	FX.2.2 EB Emergency Break (/tr)(stp1)

1	8/	12	/2	01	4
---	----	----	----	----	---

26.3.13.10.2 General requirements

26.3.13.10.3 Requirements for Ceiling speed monitoring

26.3.13.10.3.3 Tables 5/6 26.3.13.10.3.4 Table 7

FX.2.3 SB Service Break (/tr)(stp2)

FT.2.1.1.3 Command Trip braking

FT.2.1.2.2 0 Normal status

FT.2.1.2.3 1 Indication status

FT.2.1.2.4 2 Overspeed status

FT.2.1.2.5 3 Warning status

FT.2.1.2.6 4 Intervention status

FT.2.1.3.1 Command brakes and TCO 2

EI.4.4 Min safe antenna position (loc/)

FX.2.1 Traction Cut Off (TCO) (/tr)(stp1)

FX.2.2 EB Emergency Break (/tr)(stp1)

FX.2.3 SB Service Break (/tr)(stp2)

IT.2.1.1 Brake revocation

Estimated train speed (/dmi)

FT.1.2.1 Determine the ceiling supervision speeds (step 1)

FT.2.1 CSM Ceiling speed monitoring

FT.2.1.1.1 Command supervision status in CSM mode

FT.2.1.1.2 Command train in CSM mode

FT.2.1.2.2 0 Normal status

FT.2.1.2.3 1 Indication status

FT.2.1.2.4 2 Overspeed status

FT.2.1.2.5 3 Warning status

FT.2.1.2.6 4 Intervention status

Target Speed (/dmi)

V_FLOI_DMI (/dmi)

V_P_DMI (/dmi)

FT.7.2 CSM Ceiling Speed monitoring

FT.7.2 CSM Ceiling Speed monitoring

1	8/	12	12	01	4
---	----	----	----	----	---

26.3.13.10.4 Requirements for Target speed monitoring TBD FT.1.2.1 Determine the ceiling supervision speeds (step 1) FT.1.6 Determine braking to target supervision limits (step 1&2) FT.2.1.2.2 0 Normal status FT.2.1.2.3 1 Indication status FT.2.1.2.4 2 Overspeed status FT.2.1.2.5 3 Warning status FT.2.1.2.6 4 Intervention status FT.2.1.3.1 Command brakes and TCO 2 FT.2.2 TSM Target speed monitoring FT.2.2.1.1 Determine speed and distance target to display FT.2.2.1.2 Determine FLOI and Permitted Speeds to display 26.3.13.10.4.15 3.13.10.4.15 FX.1 Data for DMI 26.3.13.10.5 Requirements for release speed monitoring FT.2.1.2.2 0 Normal status FT.2.1.2.3 1 Indication status FT.2.1.2.4 2 Overspeed status FT.2.1.2.5 3 Warning status FT.2.1.2.6 4 Intervention status FT.2.2.1.1 Determine speed and distance target to display FT.2.3 RSM Release speed monitoring 26.3.13.10.5.4 Tables 13/14 FT.7.3 RSM Release Spead Monoring FT.7.3 RSM Release Spead Monoring 26.3.13.10.5.5 Table 15 26.3.13.10.6 Transitions between types of Speed and distance monitorin FT.1.8.2 Select types of speed and distance monitoring FT.2.1.2.1 Select Supervision status FT.2.1.3.1 Command brakes and TCO 2 26.3.13.10.6.1 Table 16 FT.7.1 Select type of speed monitoring