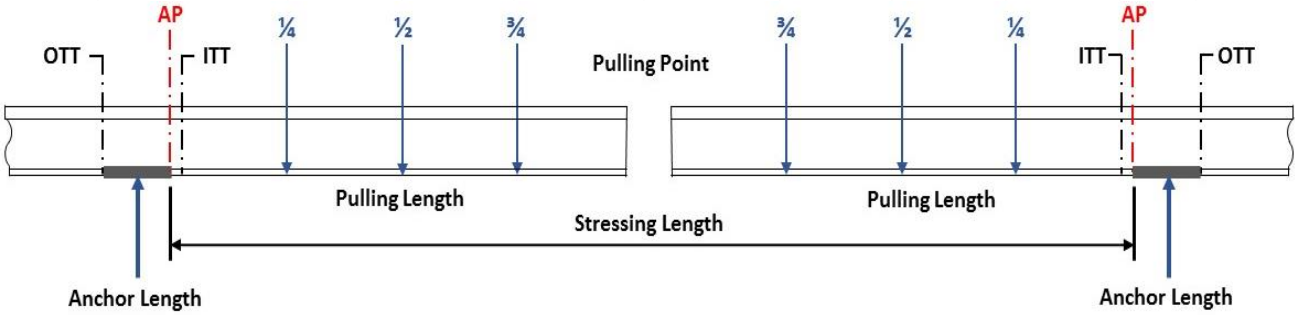
STRESSING RECORD FORM ETW0105F-01 V2.0 Date 18.10.2017

Rail Adjustment Performed in Accordance with ETW-01-05; Signed: ..... Dated: ...../...../.....

PLAN THE RAIL ADJUSTMENT

Line	Track	Leg	Rail Size	Sleeper Type	Fastening Type	Grade	Curve Radius	Weld Reference



Rail Adjustment Location	Anchor Point 1 KMS				Pulling Point KMS				Anchor Point 2 KMS	
Rail Adjustment Lengths (m)	Anchor Length 1			A	Pulling Length 1	Pulling Length 2	B		Anchor Length 2	A + B = C Stressing Length
Reference Marks Set-Out (m)	Anchor Point 1 0 m	¼	½	¾	Punch Mark Distance (mm) D	¾	½	¼	Anchor Point 2 0 m	E Weld Gap (mm)

STEP 1 - CHECK AVERAGE TEMPERATURE. IF OK, PROCEED AND FLAME CUT RAIL AT THE PULLING POINT

Rail Temp (°C)	Anchor Point 1 Temp	Pulling Point Temp	Anchor Point 2 Temp	Average Temp

STEP 2 – RELEASE FASTENINGS. CHECK MOVEMENT OUT OF STRESSING LENGTH AT ITT'S

Movement Out of ITT (mm)	ITT 1	F ←	→ G	ITT 2

STEP 3 - CHECK AVERAGE TEMPERATURE, AND CALCULATE RAIL EXTENSION

Rail Temp (°C)	Anchor Point 1 Temp		Pulling Point Temp		Anchor Point 2 Temp	H	Average Temp	
Calculate Temp Difference (°C)						38 - H = J	Temp Difference	
Calculate Rail Extension (mm)	J x 0.0115 x A = K	Extension 1	Extension 2	L = J x 0.0115 x B		K + L = M	Total Rail Extension	
Calculate Expected RF Extensions (mm)	¼	½	¾	¾	½	¼		
Calculate Cut Gap (mm)						E + F + G + M = N	Cut Gap	

STEP 4 & 5 – FIT TENSORS AND RELAX RAIL BY THE REQUIRED EXTENSION (OVERLAP IF REQUIRED). VISUALLY CHECK MOVEMENT AT ½ REFERENCE MARK DURING RELAXING

Calculate Relaxation Extension (mm)

C x 0.12 = P → Relaxation Extension

STEP 6 – AFTER RAIL IS RELAXED, CHECK FOR MOVEMENT AT OTT'S. IF THERE IS ANY MOVEMENT, STRENGTHEN THE ANCHOR LENGTH AND RESET THE OTT IN ACCORDANCE WITH THE WORK INSTRUCTION

STEP 7 – MARK AND SCRIBE THE ¼, ½, AND ¾ REFERENCE MARKS

STEP 8 - RECHECK AVERAGE TEMPERATURE, AND RECALCULATE RAIL EXTENSION IF REQUIRED

Rail Temp (°C)

Anchor Point 1 Temp | Pulling Point Temp | Anchor Point 2 Temp → **Q** → Average Temp

(THE PICS ONLY NEEDS TO COMPLETE THIS SECTION IF THE AVERAGE TEMPERATURE **Q** IS DIFFERENT FROM **H** IN STEP 3)

Calculate Temp Difference (°C)

38 - Q = J → Temp Difference

Calculate Rail Extension (mm)

J x 0.0115 x A = K → Extension 1 | Extension 2 → **L = J x 0.0115 x B**

K + L = M → Total Rail Extension

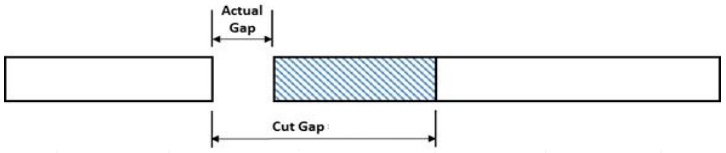
Calculate Expected RF Movement (mm)

¼	½	¾		¾	½	¼

Calculate Cut Gap (mm)

E + F + G + M = N → Cut Gap

STEP 9 – TRIM THE GAP BETWEEN RAILS AND TENSE RAIL TO WELD GAP



STEP 10 – CHECK FOR MOVEMENT AT ITT'S INTO THE STRESSING LENGTH. TRIM RAIL IF PRACTICAL AND TENSE RAIL BACK TO WELD GAP

Movement In at ITT (mm)

ITT 1 → **R** → | ← **S** ← ITT 2 → **R + S** → Trim Rail

STEP 11 – MEASURE AND RECORD THE ACTUAL MOVEMENT AT THE REFERENCE MARKS AND COMPARE TO THE EXPECTED MOVEMENT CALCULATED IN 3 OR 8. IF ACTUAL MOVEMENT IS NOT WITHIN 5mm OF ESTIMATED, THEN INSPECT STRESSING LENGTH FOR RAIL JAM OR OBSTRUCTION

Measure Actual RF Movement (mm)

¼	½	¾		¾	½	¼

COMPLETE STEPS 12 TO 16 IN ACCORDANCE WITH THE WORK INSTRUCTION (SUMMARY CHECKLIST FOR FIELD USE)

STEP 17 – RECORD FINAL PUNCH MARK DISTANCE, AND CALCULATE ACTUAL RAIL ADDED (-) OR REMOVED (+)

Measure Final Punch Marks (mm)

T → Punch Mark Distance

D - T → Change in Rail

Stressing Length Plan

Highlight any of the following within the stressing length, or within close proximity;

- Turnouts / Catchpoints
- Bridges
- Level Crossings (tin top, concrete cast insitu etc.)
- Extent of Stressing Length with a tunnel, cutting or embankment

Track Geometry;

Notes