



Federal Railroad Administration

Railroad Safety Advisory Committee

Track Safety Standards Working Group Report (Rail Integrity Task Force)

March 18, 2010

Track Safety Standards Working Group Rail Integrity Task Force

**Recent Rail Integrity Task
Force Meeting Held on
March 9-11, 2010 in
Atlanta, GA**

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Rail Integrity Task Force

RSAC Task 08-03

- Factors that can and should be included in determining the frequency of internal rail flaw testing and a methodology for taking those factors into consideration with respect to mandatory testing intervals;
- Whether the quality and consistency of internal rail flaw testing can be improved and how;
- Whether adjustments to current remedial action criteria are warranted;
- The effect of rail head wear, surface conditions and other relevant factors on the acquisition and interpretation of internal rail flaw test results;

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Task 08-03 (first item): Factors that can and should be included in determining the frequency of internal rail flaw testing and a methodology for taking those factors into consideration with respect to mandatory testing intervals;

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NTSB Recommended Criteria

NTSB has recommended a damage tolerance approach that would establish an inspection frequency that allows internal rail defects to be identified before they reach critical size. FRA to consider factors that affect defect growth rate:

- rail head wear
- accumulated tonnage
- rail surface conditions
- track geometry
- track support
- steel specifications
- temperature differentials
- residual stresses in rail

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Task Force Agreed to Consider Performance Based Test Model that would address NTSB recommendations:

Consensus Reached on Volpe Recommended Model Driven by Minimum Criteria of:

- Service Failure Rate (Fatigue Defects Only)
- Detected Defect Rate
- Annual Tonnage
- Performance Target (Risk Factor)
- Slow Crack Growth Life

Additionally: Minimum once a year or every 30 MGT test frequency .

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- **RR's to provide FRA with access to annual internal flaw detection program when requested**
- **Program will be updated annually with adjustments made as necessary to maintain target rate**
- **RR's to allow FRA access to defect and failure data to ensure compliancy**

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Volpe model will be provided to RR's on FRA website:

SELF-ADAPTIVE SCHEDULING ALGORITHM

INPUT: Enter your data in yellow cells. Click button to calculate. Output appears in green cells below.

Service failures per mile performance target:	0.10	SF/mile for this segment
Annual tonnage for this segment:	50	MGT
Number of inspections in previous year:	4	
Detected defects per mile in previous year:	0.250	
Service failures per mile in previous year:	0.090	

OUTPUT

Number of rail tests for this segment next year:	3
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January, 2010

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Task 08-03 (second item): Whether the quality and consistency of internal rail flaw testing can be improved and how;

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RITF Consensus

- Consensus reached on definition of a “valid test”. Definition added to 213.237.
- Consensus reached on minimum criteria for a “qualified operator”. To be added to CFR 49; Part 213 as new 213.238.
- Guideline to sizing transverse oriented defects reflecting rail head loss in 213.113 Remedial Action Table

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Task 08-03 (third item): Whether adjustments to current remedial action criteria are warranted;

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RITF Recommendations

- RITF consensus on “crushed head defect” and “longitudinal web oriented weld defect” definitions completed. Remedial action to be included in §213.113 defect table.
- RITF consensus on revisions to current defect definitions.
- RITF consensus on revision to the remedial action table focusing on transverse oriented defects.

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Task 08-03 (fourth item): The effect of rail head wear, surface conditions and other relevant factors on the acquisition and interpretation of internal rail flaw test results.”

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RITF Recommendation

Task force has previously recommended that this item be closed and does not recommend regulatory action.

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Task force action item request:

OIG recommended that FRA revise its track safety regulations for internal rail flaw testing to require the railroads to report all track locations (milepost numbers or track miles) covered during internal rail flaw testing.

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Current § 213.241(c) - Identification and milepost limits of track tested is not required:

§ 213.241(c) Rail inspection records shall specify the date of inspection, the location and nature of any internal defects found, the remedial action taken and the date thereof, and the location of any intervals of track not tested per §213.237(d). The owner shall retain a rail inspection record for at least two years after the inspection and for one year after remedial action is taken.

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RITF consensus to revise Section 213.241(c) that will provide FRA access to documentation that confirms a continuous test was performed on all tracks required.

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CWR Update:

- Final rule was published in Federal Register August 25, 2009.
- Correcting Amendment was published in Federal Register October 21, 2009 that includes compliance dates for commuter, intercity passenger, and any additional railroad that has CWR.
- Final rule; response to petition for reconsideration was published in Federal Register January 29, 2010 that re-defines “Buckling Prone Condition” and “Adjusting/De-Stressing”.

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Next RITF meeting to be held in
Washington D.C. on April 20, 2010.

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Questions?