



**IDEAL/TSR and SCB Smart Jigs**  
Bluetooth enabled asphalt jigs



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### Semi Circular Bend Test Background

**Balanced Mixes!**

Not too **Brittle** that can cause cracking:      Not too **Flexible** that can cause rutting:



A Balanced Mix Design!



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### The Balanced Mix Design



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### Older Loading Frames



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### SCB Tests

- University of Illinois – Urbana Champaign Illinois Flexibility Index Test (I-FIT)
  - Local calibration
  - Analysis software
  - 1 notch depth
- Louisiana State University-SCB
  - 3 Notch Depths
- IDEAL – CT
  - Texas A&M – College Station, TX
  - Gaining most popularity
  - Least sample preparation
  - Uses AASHTO T-283 (TSR) Jig



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### Instron Smart Jigs



IDEAL-CT/TSR Jig      Smart-SCB



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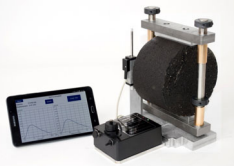

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### IDEAL-CT

- 2 Tests in 1
  - IDEAL CT
  - Tensile Strength Test
- Self contained system
- No need to replace old frames
- Digital results

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### Smart-SCB

- Performs both IFIT and LSU Test Protocols
- Self contained system
- No need replace of old load frames
- Digital test results

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### IDEAL/TSR Jig Accessories



1. Jig w/ Bluetooth
2. USB Cable
3. Load Cell
4. Android Tablet
5. LVDT
6. Rod and Magnet
7. Power Cord
8. Lubricant
9. Analysis Software
10. Marshall Hardware

\*Optional IDEAL / Marshall Upgrades



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### IDEAL/TSR & Smart SCB Advantages

- Give new life to older load frames
- Digital test results
- No clerical errors
- Easy test set-up
- Analysis software included
- Perform multiple tests
- Easy to use



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### Questions?



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## ACT

Asphalt Compatibility Test



The image shows the ACT testing equipment, which consists of a green base unit with a control panel and a separate green unit on the right. A sample is being processed in the center.



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## What is ACT?

- System to quantify results the for Boils Test (ASTM 3625)
- Adhesion Test
- Uses LED Light & Colorometer System
- High degree of correlation with TSR Test



The image shows the ACT testing equipment, including a green base unit, a control panel, and a separate green unit.



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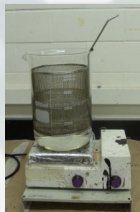
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## Boil Test (ASTM 3625)

- Been in practice since 1970s
- Quick determination of adhesive damage
- Visual Inspection of color change
- Excellent correlation to asphalt moisture susceptibility tests (TSR Test)



The image shows a laboratory setup for the Boil Test, featuring a glass beaker on a magnetic stirrer with a heating mantle.



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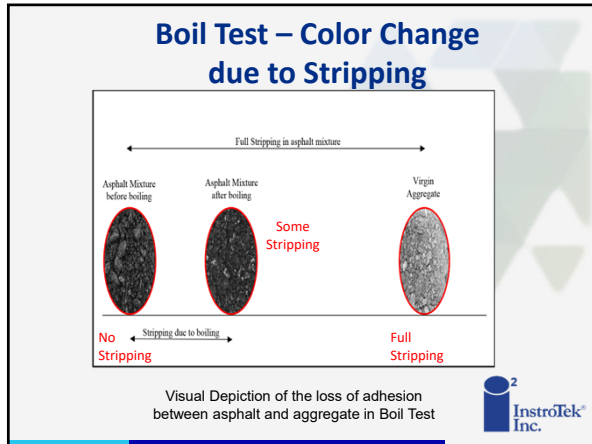
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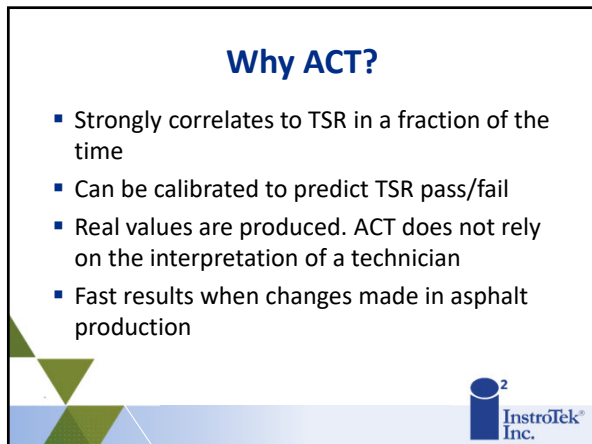
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### ACT Advantages

- Quantify Boil Test (ASTM D3625) test results
- Predicts passing AASHTO T 283 test results within an hour instead of days
- Evaluates different anti-strip additives for optimum additive content
- Ensures production changes do not result in adhesion failure in the mixtures or poor pavement quality.
- Eliminates technical judgment calls for consistent test results
- Straight-forward, easy to use system



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### Questions?



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### Xplorer<sup>2</sup> Model 3500



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**FEATURES:**

- GPS
- Bluetooth
- USB Storage
- Project Storage
- Memory/Storage of Results
- Alphanumeric Keypad
- Integrated Battery Port for Gauge Location
- Tracking Devices
- Large 4 line X 20 Character Backlit LCD Display
- Backlit LCD and Keypad
- Reporting App Available for any Android®
- Smartphone or Tablet



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