

**SHOTLIST OF FOOTAGE RESEARCH & DEVELOPMENT**

<b>TITLE OF PRODUCTION</b>	<b>Research &amp; Development, Linz, Austria</b>
<b>CONTACT</b>	<a href="mailto:mediarelations@voestalpine.com">mediarelations@voestalpine.com</a>
<b>DATE OF PRODUCTION</b>	<b>June 2016</b>
<b>AVAILABLE FORMATS</b>	<ul style="list-style-type: none"> <li>» TV Europa (50i): mov, 1920x1080, Full HD</li> <li>» TV USA (59i): mov, 1920x1080, Full HD</li> <li>» Web (H.264): mp4, 1920x1080, Full HD</li>   <li>» 4K available on request</li> </ul>
<b>KEYWORDS</b>	<ul style="list-style-type: none"> <li>» Research</li> <li>» Innovation</li> <li>» Development</li> <li>» Light microscopy</li> <li>» Purity grade</li> <li>» Structure</li> <li>» Scanning electron microscopy</li> <li>» Corrosion test</li> <li>» phs-furnace</li> </ul>

SCENE	TIME FROM	TIME TO	CAMERA PERSPECTIVE	SCENE DESCRIPTION
1	00:00	00:10	American	Young male employee taking a reading with a light microscope (Zeiss, Observer Z1): standard purity grade/hot-rolled strip/inclusions in the steel
2	00:10	00:17	American	Employee reaches for samples and inserts them into the microscope

SCENE	TIME FROM	TIME TO	CAMERA PERSPECTIVE	SCENE DESCRIPTION
3	00:17	00:25	Medium Close up	Employee from front, looks into microscope (Zeiss, Observer Z1): standard purity grade/hot-rolled strip/inclusions in the steel
4	00:25	00:31	Medium Close up	Employee from behind, looks into microscope and then performs analysis on the PC
5	00:31	00:39	American	Young female employee sits in front of the microscope, inserts samples and observes them (light microscope, Zeiss, Observer Z1 - structure characterization, ...)
6	00:39	00:50	Medium Close up	Employee looks through the light microscope (Zeiss, Observer Z1), camera pans to hand
7	00:50	00:57	Close up	Hand adjusts the light microscope (Zeiss, Observer Z1)
8	00:57	01:01	Extreme Close up	Hand adjusts the light microscope (Zeiss, Observer Z1)
9	01:01	01:09	Medium Close up	Pans from screen to female employee
10	01:10	01:15	Extreme Close up	Light microscope (Zeiss, Observer Z1) - switch to magnification/lens change
11	01:15	01:25	Medium Long Shot	Male employee sits in front of PC, beside him is a scanning electron microscope (Zeiss, ULTRA 55)
12	01:25	01:33	American	Scanning electron microscope (Zeiss, ULTRA 55)
13	01:33	01:55	Medium Long Shot	2 employees performing corrosion test: Corrosion test chamber is filled with samples and put into operation
14	01:55	02:02	Close up	Corrosion test: accelerates corrosion in a salt fog

SCENE	TIME FROM	TIME TO	CAMERA PERSPECTIVE	SCENE DESCRIPTION
15	02:02	02:13	Medium Close up	Female employee tests corrosion protection, scrapes a sample (width of paint disbonding is measure for corrosion resistance)
16	02:13	02:20	American	Employee tests corrosion protection, scrapes a sample
17	02:20	02:28	American	Laboratory coater, new organic coatings (paint) are first tested in the laboratory
18	02:28	02:37	American	Coater discharge
19	02:37	02:45	Medium Long Shot	Employee inserts sample after coater/coating in furnace
20	02:45	02:52	Medium Close up	Employee inserts sample after coater/coating in furnace
21	02:52	03:02	Medium Long Shot	Employee inserts sample into phs furnace
22	03:02	03:09	Medium Close up	Employee inserts sample into phs furnace
23	03:09	03:16	Close up	phs annealing furnace temperature gauge
24	03:16	03:32	Medium Close up	Female employee removes sample from phs furnace and inserts sample into the testing press (press hardening)