

# Transition Detection for Low Speed Wind Tunnel Testing Using Infrared Thermography

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Thesis submitted to the faculty of the Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the degree of

Master of Science

In

Aerospace Engineering

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02/07/2014

Blacksburg, Virginia

Keywords: Boundary Layer Transition, Infrared Thermography, Wind Turbine, Wind Tunnel, Stethoscope

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The following figures were used with written permission of Dr. William J. Devenport, Professor & Assistant Department Head for Laboratory Facilities and Director of the Virginia Tech Stability Wind Tunnel:

*Figure 2.1 Full Circuit of the Virginia Tech Open Jet Wind Tunnel*

*Figure 2.5 (a) Photograph and (b) Schematic showing Full Circuit of the Virginia Tech Stability Wind Tunnel*

*Written Permission Documentation is on page 2*

## **Permission for Use of Likeness**

The likeness used in the following figure was used with written permission of Mr Bill P. Oetjens, Virginia Tech Stability Wind Tunnel Engineer:

*Figure 3.42 Experimenter Taking Stethoscope Measurements on the Pressure Side of the Insulated 0.8-m DU96-W-180 in the Stability Wind Tunnel*

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## Liselle A. Joseph

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**From:** devenport@vt.edu <wdevenpo@vt.edu>  
**Sent:** Tuesday, March 18, 2014 10:32 AM  
**To:** Liselle A. Joseph  
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**Subject:** RE: Picture Permissions

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Liselle,

I hereby grant you permission,

William

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**From:** Liselle A. Joseph [mailto:[liselle@vt.edu](mailto:liselle@vt.edu)]  
**Sent:** Tuesday, March 18, 2014 10:38 AM  
**To:** [devenport@vt.edu](mailto:devenport@vt.edu)  
**Cc:** 'Aurelien Borgoltz'  
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Dr. Devenport,

I hereby request your permission to use Figures 2.1 and 2.5 in my thesis, since these were initially taken/made by you.  
(see attached for figures and graduate school comments)

Thanks.  
Liselle.

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**Liselle A. Joseph**

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**From:** Bill Oetjens <boetjens@vt.edu>  
**Sent:** Sunday, March 16, 2014 4:45 PM  
**To:** Liselle A. Joseph  
**Subject:** Re: Figure Acknowledgement

Hi Liselle,

You can use the photo, no problem.

Hope your feeling better.

Bill

On Sun, Mar 16, 2014 at 3:00 PM, Liselle A. Joseph <[liselle@vt.edu](mailto:liselle@vt.edu)> wrote:



Hi Bill,

I have included a photo of you using the stethoscope in my thesis in Figure 3.42 (see attached),.

I would like your permission to use your image in the final published copy. If you are not comfortable with this, I can also blur your face out. Let me know which you prefer.

Thanks!

Liselle.

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