

IOWA STATE UNIVERSITY

AIRCRAFT ICING PHYSICS & ANTI-/DE-ICING TECHNOLOGY LABORATORY

<http://www.aere.iastate.edu/icing/>

ISU Icing Research Tunnel (ISU-IRT) Usage Rates (updated on 01/01/2019):

- 1) The basic operating rate is \$3,000 per eight-hour occupancy day. The rate includes:
 - a) Icing tunnel rental and use of a high-speed camera to acquire ice accretion images.
 - b) One staff member to operate ISU-IRT and instruments, install and remove models.
 - c) Acquired digital photographs and videos obtained during the ice accretion testing.
- 2) Occupancy starts with test section preparation for model installation and ends with model removal and test section restoration. Operating hours are 8:30 AM – 5:30 PM with 1.0 hour break near noon, Monday to Friday. On at least the first day of testing, an 8:30 AM safety and test review meeting will be held with on-site customer representatives before starting operations. This time is included in the billable occupancy. Occupancy time is not charged during unscheduled facility troubleshooting or maintenance.
- 3) Setup and tearout days will be charged at \$2,000 per eight-hour day. Setup and tearout time can be charged as fractional days and combined with fractional operating days.
- 4) The minimum charge is one complete eight-hour day (i.e., \$3,000).
- 5) An additional rental of other specialized instruments (e.g., IR thermal imaging system, PIV system, 3D profiler, load cells, pressure scanners ...) will be charged at \$500/day per system.
- 6) Additional test support technician beyond part 1b. Will be billed at \$50/hr per technician.
- 7) Overtime operation for daily time exceeding eight hours or outside normal operating hours will be charged at \$500 per hour. Overtime operation must be approved by the lab Director.
- 8) Engineering services, reporting and project management will be charged at \$150/hr.
- 9) Fabrication services are available at \$100 per machine hour. Material costs are charged at cost plus 10%. Rapid prototyper charges are \$50 per machine hour with a \$150 minimum charge.
- 10) The customer assumes all shipping expenses to and from ISU-IRT laboratory. ISU-IRT personnel can assist in packing and shipping, but cannot take responsibility for any damages.
- 11) The customer assumes repair expenses to the facility or equipment in the event of a customer-supplied model failure and/or customer negligence.
- 12) A signed testing service agreement and non-refundable deposit of \$2,000 per occupancy day is required to reserve icing tunnel time. An additional non-refundable deposit is required for model design engineering or fabrication.

IOWA STATE UNIVERSITY

 ICING RESEARCH TUNNEL

POINT OF CONTACT:

Dr. Hui Hu

Martin C. Jischke Professor and Lab Director
Iowa State University, Ames, Iowa 50011

Email: huhui@iastate.edu

<http://www.aere.iastate.edu/icing/>