
February 2006

Rock River Valley Section

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Event

Sense

The Institute of Electrical and Electronic Engineers, Inc.

RRVS Section and IAS Chapter Meeting — Engineers Week

Ram Air Turbine (RAT) Emergency Aircraft Power

WHEN TUESDAY, February 21, 2006

WHERE

Rock Valley College, **Student Center (SC) Building, Room 1118 (Atrium)**. I-90 to Riverside Blvd., exit and go west to Mulford Rd. Go south to 2nd light, turn east, go 1/4 mile, turn right into parking lot.

AGENDA

7:00 PM Awards
7:15 PM Program
9:00 PM Conclusion

PROGRAM

What does a RAT do? The RAT is an air turbine device on an aircraft that is deployed into the air stream to deliver emergency hydraulic and electrical power when the aircraft's engine-driven pumps and generators are unavailable due to a lack of engine power. The emergency power operates essential electrical instruments and actuators that move flight control surfaces (rudder, elevators, ailerons) so the pilot can maintain control of the aircraft and glide to a landing.

Does this happen often? Thankfully, no. Total loss of engine power is rare. Still, more than 1,000 lives have been saved by Hamilton Sundstrand



RATs on aircraft that lost all engine power from causes including fuel contamination, fuel miscalculations and aircraft maintenance errors.

What aircraft are equipped with Hamilton Sundstrand RATs? Over 7,000 aircraft in more than 20 different models, including all Airbus commercial jets, the Boeing 757/767 and new 787, several regional jets from Bombardier and Embraer, plus business jets and military aircraft.

SPEAKER

MICHAEL J. ZOLIDIS, Chief Engineer, Hamilton Sundstrand, Electric Systems, and Director Electric Systems 787 Programs joined



Hamilton Sundstrand in 1979 after 7 years in the United States Army Corps of Engineers. While at Hamilton Sundstrand Mike served in positions of increasing responsibility from Project Engineer, Design Engineer, Manager of Engineering, Chief Engineer and most recently as Director of Electric Systems 787 Programs.

Mike has an extensive background in RATs having served as both a design and project engineer on the first Hamilton Sundstrand designed RAT for the Boeing 767 and 757 aircraft and then on subsequent RAT's for the Airbus A300/A310, Canadair Challenger 600 and others. Subsequently, he served as Manager of Engineering for RATs on multiple programs.

Mike possesses a BSc from the United States Military Academy at West Point and an MSME from The Ohio State University. He has been active in both the ASME and SAE.

MEAL INFORMATION

There will be no food served.

NOTE

The meeting is open to the general public. You need not be an IEEE member. Guests are welcome. Please call Ginger at 815-394-5696 for questions.

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*Messages for student officers can be left at the NIU Dept of Electrical Engineering,
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The Rock River Valley Section gratefully acknowledges the following companies and university for supporting Section Officers:

Hamilton Sundstrand • Northern Illinois University • BP Technologies



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Rock River Valley Section
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RRVS Calendar

February RRVS Annual Engineering Week MeetingTUESDAY.... February 21
"Ram Air Turbine (RAT) Emergency Aircraft Power" at Rock Valley College

March RRVS Section MeetingWEDNESDAY..... March 29
"Emerging Nanotechnology Device and Circuit Technologies" at Rock Valley College



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