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John P. Zarling, interviewee

Karen Cedzo, interviewer

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John Zarling, mechanical engineer, said you can see where they have installed a vapor barrier without any leaks, very high quality windows with good weather stripping, and well weather stripped doors. He said you are almost living in a balloon. Funded by a Transportation and Public Facilities Division of Building Research Zarling is the principal investigator of a project to look at air to air heat exchanges to improve ventilation in well insulated homes. Zarling said when you build a well-insulated home and put in a very tight vapor barrier you do not get enough natural infiltration of ventilation in the home to allow it to be a comfortable place to live. In order to solve that problem without consuming extra energy is to use air to air heat exchangers. He explained the concept of air to air heat exchangers. About ninety percent of the energy can be recaptured and this also improves the environment inside the building. There are problems making living in super insulated homes potentially hazardous. People in the lower 48 living in well-sealed homes have found a build-up of radon, carbon monoxide, and some of the nitrous oxides. Zarling said they felt there was a need in Alaska to evaluate air to air heat exchangers to improve the environment in these homes. Last semester there were a couple of graduate students evaluating some Japanese Mitsubishi heat exchangers. They ran into a few problems related to frost buildup in the exchanger cores and shrinkage of the cores. They will be doing further evaluation this summer. They have built three units this summer and purchased a unit from Intercom. The unique Alaska environment poses several application problems. He talked about the performance of the different units. Scott Bell built the three units and is doing the testing which is underway. They are using a cold room for testing, but it only goes down to minus 25. This winter they plan to install some of the units in some recently built super insulated homes in the Fairbanks area.

Karen Cedzo talks about the campus calendar and activities