Mr. Ko-Wei Liu

Technical Lead Engineer on the
C-17 Program, Boeing

Biography:
Ko-Wei is a Technical Lead Engineer on the C-17 Program at Boeing in Long Beach, California. His career has been spent entirely in the field of aircraft structures in various disciplines supporting ASIP. This includes research and methodology development, requirements, stress, fatigue, fracture mechanics, finite element, testing, aircraft tracking, design and production support, structural certification, failure analysis, repair, risk analysis, and sustainment.

Ko-Wei began his aerospace career with Rockwell International in 1978 in El Segundo, California. During his time at Rockwell International Aircraft Division, Ko-Wei worked in research, development, B-1 and T-39 programs. His assignment included analysis tool development, stress, finite element, design support, testing, and aircraft tracking. It was on the B-1 program when he was first introduced to MIL-STD-1530, MIL-A-83444 and MIL-A-8866.

In 1985, Ko-Wei joined McDonnell Douglas Commercial Aircraft in Long Beach. He worked the development of DC-10 supplementary inspection document and MD11 damage tolerance assessment. Later he was tasked to lead the Navy T-45 landing gear team supervising the durability analyses and full scale fatigue test engineering development. With his experience on D&DT on B-1, he was also supporting C-17 ASIP during this time. He officially joined the C-17 program in 1987 as lead engineer forming a team responsible for analysis tools development, establishing durability and damage tolerance design criteria, analysis procedures and guidelines, planned and executed development test program, and supported the maintenance steering group in the development of structural maintenance requirements.

In the early 1990s Ko-Wei was asked to lead the durability and damage tolerance group responsible for executing C-17 ASIP that included DADTA, full scale durability test, individual aircraft tracking, loads monitoring, force structural maintenance and Analytical Condition Inspection programs. The team's main accomplishment was to complete all the contractual ASIP requirements, and obtain airframe airworthiness for flight. He was also in charge of full scale durability test failure root cause assessment and developing solutions

to correct the deficiencies. In late 1990s Ko-Wei participated in large unitized structure implementation and evaluating new technologies to reduce manufacturing cost. He worked closely with customers to develop criteria and qualification plan to certify the new design structure. Currently Ko-Wei oversees the team that is responsible for executing all the ASIP sustainment activities, support in-service issues, defining structural maintenance and modification requirements, and support force management activities. He also works closely with USAF and foreign customers on maintaining structural airworthiness of the C-17 aircraft.

Ko-Wei earned his MS degree in Engineering from California State University, Long Beach. He has authored several technical papers as well as engineering reports. Ko-Wei was selected as a Boeing Technical Fellow in 2003. In this capacity, he has been asked to provide engineering support and consultation to other Boeing aircraft programs and has served as member of numerous Independent Review Teams, within and outside of Boeing.