

IHI R&D AND MANUFACTURING FACILITY

RECENT ACTIVITY
MARCH 5, 2009



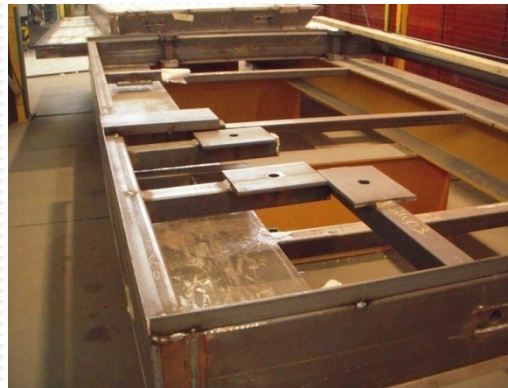
ON-GOING INTEREST FOR POTENTIAL IHI JV FACTORIES, ALL ARE COMING TO WITNESS THE INTRICATE AND ADVANCED IHI PANEL SYSTEM



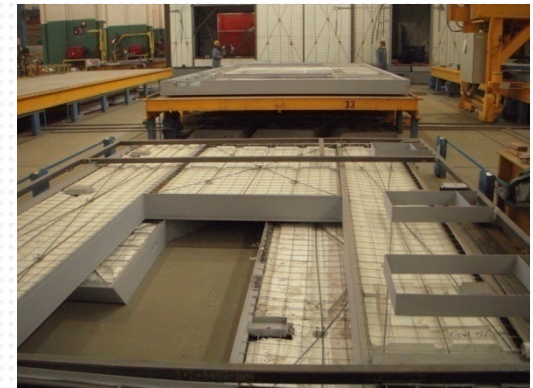
TYPICAL INTERSECTION OF 2 CHANNELS DURING FRAMING



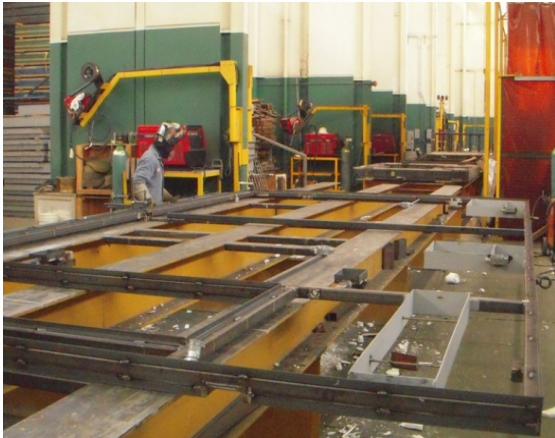
THE FRAME OF A CURVED PANEL



TYPICAL FRAMING OF A WALL WITH THIN WALL CONNECTIONS



TYPICAL FRAME OF VERY LARGE BUILT-IN DUCT OPENINGS



**ON-GOING FRAMING AT THE IHI
R&D AND MANUFACTURING
FACILITY**



AGAIN, INTRICATE PANEL MANUFACTURING FEATURING THE ADVANCED IHI UNIQUE TECHNOLOGY. ABOVE ARE ALL FOREIGN TO ANY OTHER TECHNOLOGY IN THE WORLD, INCLUDING PRE-CAST AND CAST-IN SITU CONCRETE



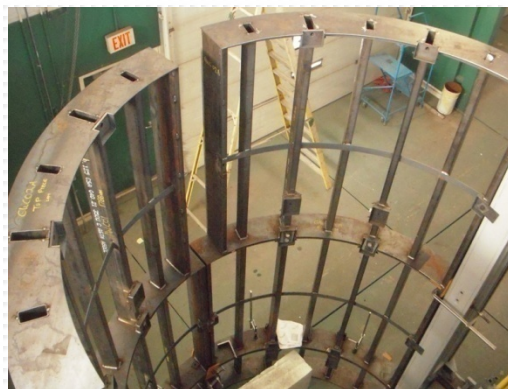
AGAIN, GENERAL VIEW OF THE CENTRAL PORTION OF THE MAIN BUILDING OF THE IHI'S MANUFACTURING FACILITY SHOWING THE GE/FANUC SUPPLIED DEFAULTED EQUIPMENT SYSTEM CAGED AND COVERED WITH THE RED PLASTIC SHIELD, READY TO BE HOPEFULLY REMOVED AND REPLACED BY A PERFORMING AUTOMATED WELDING & CUTTING SYSTEM ASAP WITH FULLY AUTOMATED JIGS. UNFORTUNATELY, THEIR PRESENCE NOW CREATES A HUGE DEAD ZONE PANEL MANUFACTURING FLOW !



PANEL RAW MATERIAL IS PREPARED IN ADVANCE TO ANY FRAMING AND COVERING STEEL SECTIONS, ELECTRIC PANEL BOX FRAMES, RIGID INSULATION, ETC.



FRAMING OF CURVED PANELS FOR THE STAIR'S WALLS. PERIMETER PLATES WILL BE HEAVILY UTILIZED WITH THE NEW AUTOMATED WELDING & CUTTING SYSTEM, TO OPTIMIZE ANY SHAPE & CUT IN A VERY FAST MANNER, NOT ONLY ANY SHAPE CAN BE MANUFACTURED BUT ALSO ALL PANELS ARE CONNECTED TOGETHER TO FORM A 3-DIMENSIONAL SPECIAL MOMENT RESISTANT FRAME STRUCTURES UNMATCHED BY ANY OTHER KNOWN SYSTEM IN THE WORLD INCLUDING PRE-CAST AND CAST IN SITU.



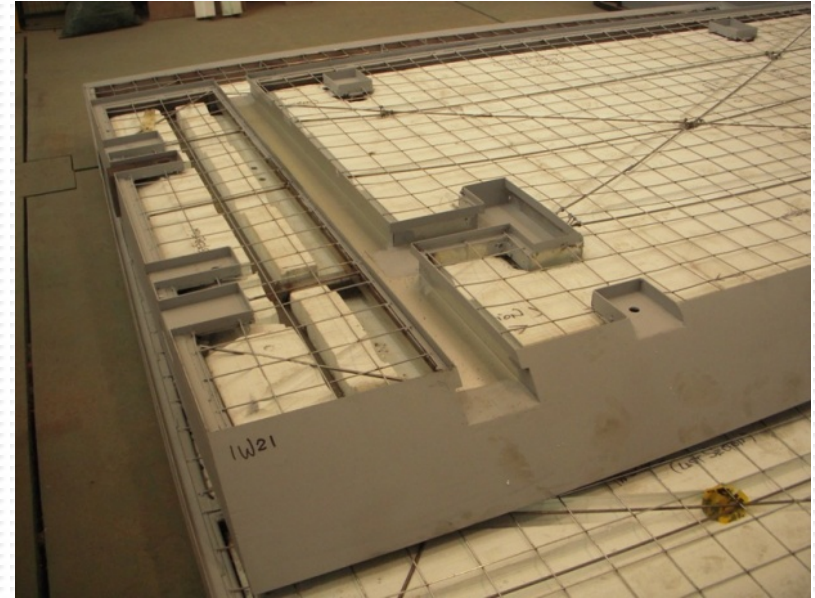
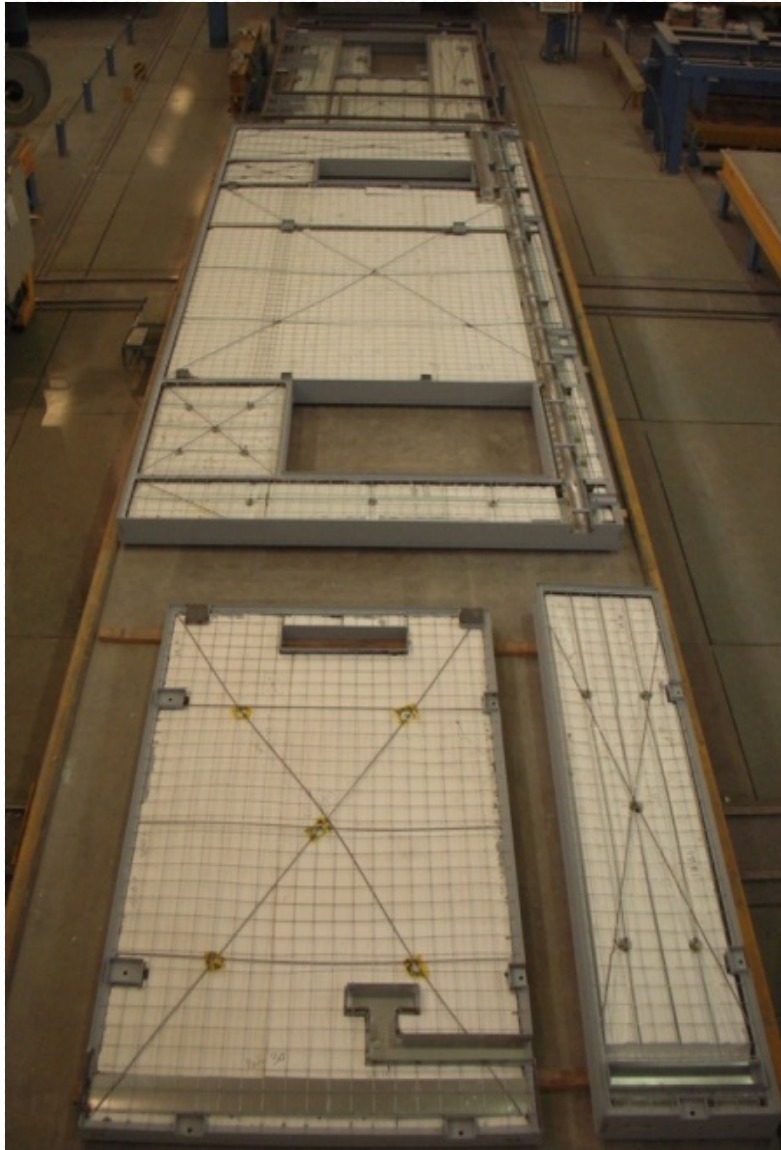
THE CONNECTED STRUCTURE OF THE STAIRCASE'S SEMI-CIRCULAR ELEMENT IS SO STRONG YET FLEXIBLE. IT IS IMPORTANT TO NOTICE THAT, IN SPITE OF THE VERY HIGH STRENGTH, THE TOTAL WEIGHT OF STEEL IS LESS THAN THAT OF A PROPERLY DESIGNED REINFORCED CAST IN SITU CONCRETE WALL WITH THE SAME SECTION. THIS IS CERTAINLY ONE OF THE MANY UNIQUE IHI'S SYSTEM FEATURES, BECAUSE THE TUBES AND PLATES HAVE VERY THIN REQUIRED SECTIONS.



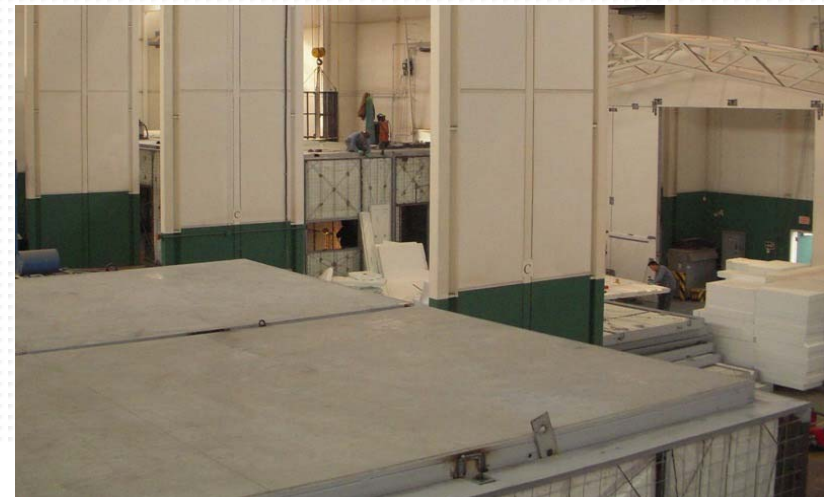
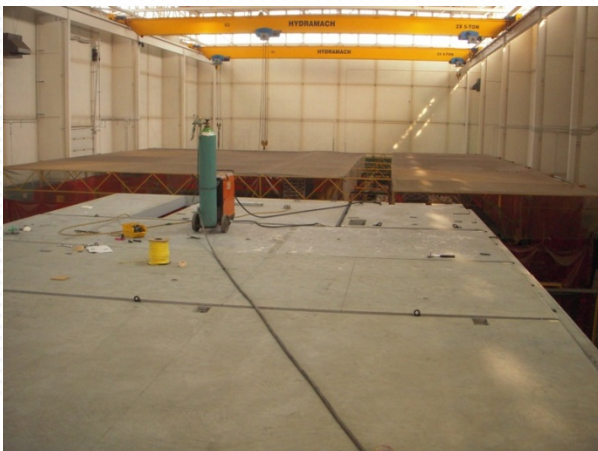


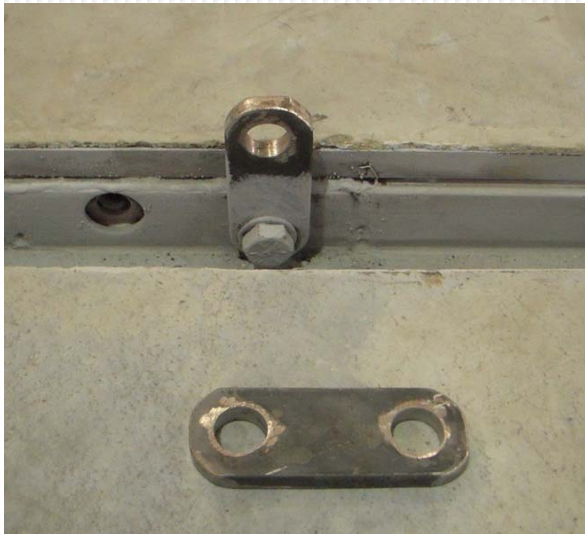
ALL LARGE WINDOWS AND DOORS ARE PROPERLY BRACED PRIOR TO CONCRETING AND SHIPPING TO MINIMIZE ANY POTENTIAL WARPING DUE TO THE HIGH FLEXIBILITY OF THE SYSTEM. AFTER ASSEMBLY AND ALL PANELS ARE CONNECTED TO EACH OTHER, ALL THESE BRACINGS WILL BE KNOCKED OFF

THESE ARE SOME OF THE PANELS READY FOR CONCRETING AND FINISHING



VARIOUS VIEWS OF THE GROUND FLOOR CEILING PANELS PERFECTLY CONNECTED AND RESTING OVER IHI WALL PANELS WITHOUT ANY CONCRETING AND WITHOUT FORMING ANY BUCKLING OR DEFORMATION OVER A PERIOD OF MORE THAN ONE MONTH. THE LEFT-TOP CORNER SHOWS THE HUGE AREA COVERED BY RED PLASTIC SHIELD COVERING THE DEFAULTED FANUC/GE ROBOTICS SYSTEM DESCRIBED EARLIER IN SLIDE # 5. LIFTING BRACKETS SHOWN FOR EXAMPLE AT THE BOTTOM RIGHT CORNER, ARE DESIGNED TO REMAIN CONNECTED AND CONCEALED TO FACILITATE THE DRY RUN ASSEMBLY, HANDLING, SHIPPING AND THEN ASSEMBLY AND DISMANTLING ON THE TEMPORARY SHOW SITE AND THE FINAL ASSEMBLY ON THE PERMANENT LOCATION OF THE SHOW HOME. THE ABOVE IS TOTALLY FOREIGN TO ANY KNOWN SYSTEM IN THE WORLD INCLUDING PRE-CAST AND CAST IN SITU CONCRETE.





THE TOP-LEFT CORNER SHOWS ANOTHER EXAMPLE OF LIFTING BRACKETS, THAT ARE ALSO DESIGNED TO REMAIN CONNECTED AND CONCEALED TO FACILITATE THE DRY RUN ASSEMBLY, HANDLING, SHIPPING AND THEN ASSEMBLY AND DISMANTLING ON THE TEMPORARY SHOW SITE & THE FINAL ASSEMBLY ON THE PERMANENT LOCATION OF THE SHOW HOME. THE LEFT BOTTOM PHOTO SHOWS CUSTOM CUT SMALL TUBES DESIGNED TO SEPARATE THE VARIOUS PANELS FOR PERFECT FIT DURING DRY RUN, TEMPORARY & FINAL ASSEMBLY. THE UPPER RIGHT PHOTO SHOWS SPECIAL CONNECTION DESIGNED FOR THE MODULES ONLY. THE LEFT ONE WILL REMAIN CONNECTED AFTER THE TEMPORARY ASSEMBLY WHEREAS THE RIGHT CONNECTION WILL BE RELEASED TO SEPARATE THE 3 DIMENSIONAL MODULE FROM THE LOWER WALL PANEL.

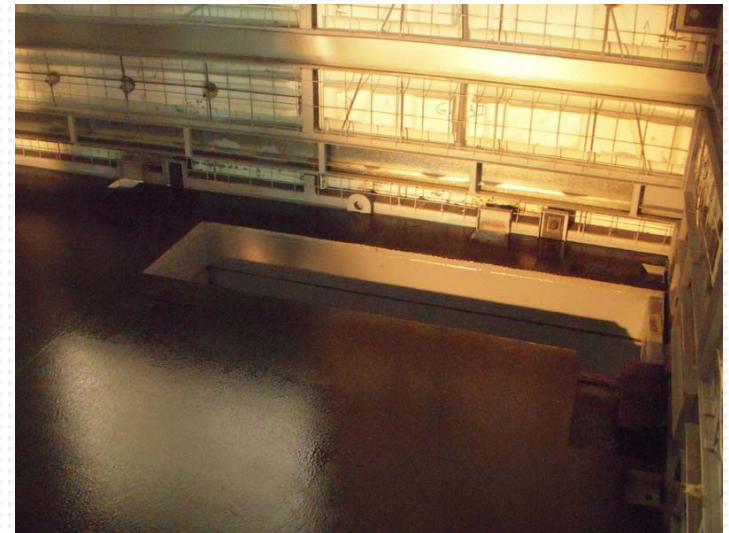
DRY RUN ASSEMBLY AND DISMANTLING OF EVERY WALL PANEL OF THE FIRST FLOOR LEVEL TO INSURE A PERFECT FIT WITH THE GROUND FLOOR WALL PANELS WHICH WILL BE SOON REMOVED FOR CONCRETING & FOR ALLOWING ROOM FOR RE-ASSEMBLING THE FIRST FLOOR WALL PANELS WITH THE BALANCE OF THE UPPER STRUCTURE INCLUDING THE PITCHED ROOF PANEL STRUCTURE.





DUE TO THE UNIQUE CHALLENGE OF SHIPPING THE INTERIOR PANELS OF THE SHOW HOME VIA OCEANS, OVER A PERIOD OF 6 WEEKS APPROX, SPECIAL EPOXY/URETHANE BLACK COATING WAS APPLIED FOR KITCHEN AND BATHROOM FLOORING, NOT ONLY TO PROTECT ANY INTERIOR EXPOSED STEEL DURING THE TRANSPORTATION OF THE PANELS, BUT ALSO WILL ACT LIKE A FLEXIBLE MEMBRANE FOR WATER-PROOFING BELOW THE GRANITE/MARBLE FLOOR FINISHING.

ALL EXTERIOR STEEL WITHIN ONE INCH FROM THE EXTERIOR SURFACE OF EACH PANEL IS MADE OUT OF STAINLESS STEEL.



LEFT SIDE PHOTOS SHOW THE FOREST GREEN EPOXY COLOR COATING FOR THE FLOOR PANELS AREAS OUTSIDE THE KITCHENS AND BATHROOMS. PLEASE SEE PREVIOUS SLIDE. THE RIGHT SIDE PHOTOS SHOW A NEW ASSEMBLY OF THE THIRD SECTION OF THE SHOW HOME.

