

## TOP WELD ANCHORS

As part of a program for evaluating various inserts used in Spancrete® hollowcore plank, weld anchors were tested in the tops of some plank as shown below. These anchors were installed by cutting holes over cores in fully cured slabs, and then installing the insert in a fairly stiff sand and cement grout.

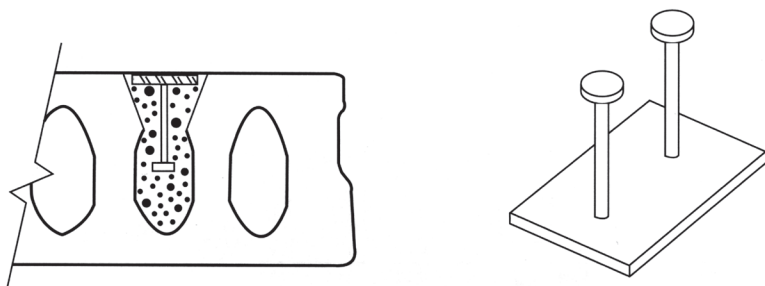


Plate  $\frac{3}{8}$ " x 3" x 6"  
 with two  $\frac{3}{8}$ " dia. x 4"  
 headed anchors

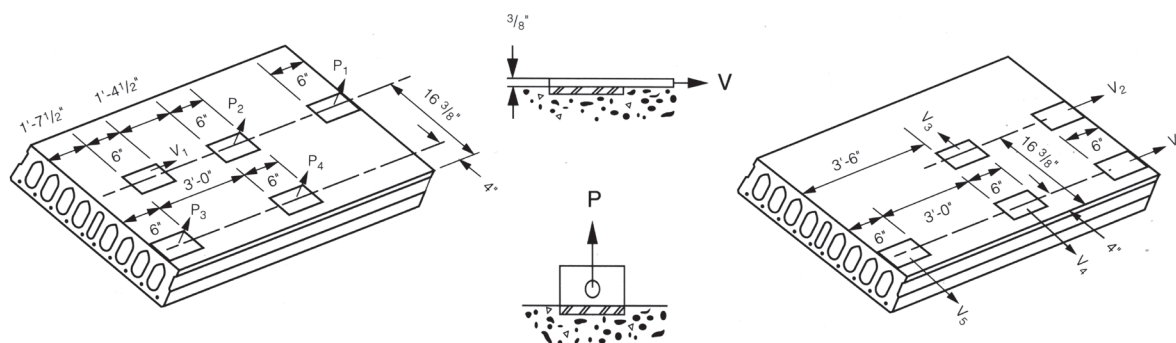
TOP WELD ANCHOR TESTED

### CONCLUSIONS:

1. Holding capacity is reduced when anchor is located near any plank edge.
2. Weld plates grouted into a finished plank are an acceptable and economical way to locate a weldment in the Spancrete plank.
3. Test values must be reduced by appropriate strength reduction factors and safety factors to obtain working load values.

*Test results are given on the reverse side.*

## TOP WELD ANCHOR TEST SETUP



Load	Test #1	Mode*	Test #2	Mode*	Avg.	Low
P <sub>1</sub>	10.05 <sup>k</sup>	Conc.	8.31 <sup>k</sup>	Conc.	9.2 <sup>k</sup>	8.31 <sup>k</sup>
P <sub>2</sub>	11.45	Conc.	10.16	Conc.	10.8	10.16
P <sub>3</sub>	8.13	Conc.	7.13	Conc.	7.6	7.13
P <sub>4</sub>	10.38	Conc.	6.90	Conc.	8.6	6.90
V <sub>1</sub>	11.94	Conc.	16.61	Steel	14.3	11.94
V <sub>2</sub>	5.71	Steel	8.04	Conc.	6.9	5.71
V <sub>3</sub>	16.61	Conc.	24.47	Conc.	20.5	16.61
V <sub>4</sub>	6.96	Conc.	4.32	Conc.	5.6	4.32
V <sub>5</sub>	-	Conc.	3.39	Conc.	3.39	3.39
V <sub>6</sub>	1.98	Conc.	6.21	Conc.	4.10	1.98

TEST  
RESULTS  
(kips)

\*Failure mode

**Note:** Values given are test results. Appropriate strength reduction factors and safety factors must be applied to these values. Consideration should be given to the number of tests and the inconsistencies in results of the concrete failures when determining these factors.

This research was done using 40" wide, 8" thick Standard Spancrete® hollowcore. However, this concept applies to all Spancrete cross sections.

### MIDWEST

Hanson Structural  
Precast Midwest, Inc.  
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Spancrete, Inc.  
Green Bay, Wisconsin

Spancrete Industries, Inc.  
Waukesha, Wisconsin

Spancrete of Illinois, Inc.  
Arlington Heights, Illinois

Wells Concrete  
Wells, Minnesota

### WEST

Hanson Structural  
Precast Pacific, Inc.  
Irwindale, California

### KIE-CON

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Anitoch, California

Owell Precast  
Sandy, Utah

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Schertz, Texas

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Mexico City, Mexico

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Monterrey, Mexico

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Barbados, West Indies

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Yapi-Merkezi  
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**UAE**  
Hi-Tech Concrete  
Products LLC  
Abu Dhabi, UAE

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### SPANCRETE IS ALSO MANUFACTURED IN:

Armenia	Ireland
China	Japan
Denmark	Russia
Guatemala	South Korea
Hungary	Switzerland

Spancrete® hollowcore is a registered trademark