

## Exploring the Mechanisms of Catalyst Synthesis

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University of California, Los Angeles, USA

**Abstract** 7KLVVWXG\LQYHVWLJDWHVWKHXVHRIFHQW  
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*A. Application of A356 Alloy and A356-SiCp Composite Suitability for a Pelton Turbine Bucket*

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HURVLRQ 7KLV VHGLPHQW VKRXOG EH  
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XFNHW

*B. Functionally Graded Manufacturing Technique: Centrifugal Casting Technique*

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JLYHVWKHPDWHULDOD EHWWHU ZHDU DQG  
FRUURVLRQ UHVLVWDQFH >@ 7KH PHFKDQLFDO

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EXFNHW SHUPDQHQW PRXOG FHQWULIXJDO  
FVWLQJ RI WKH EXFNHW DQG  
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*A. Fabrication of Pelton Turbine Bucket*

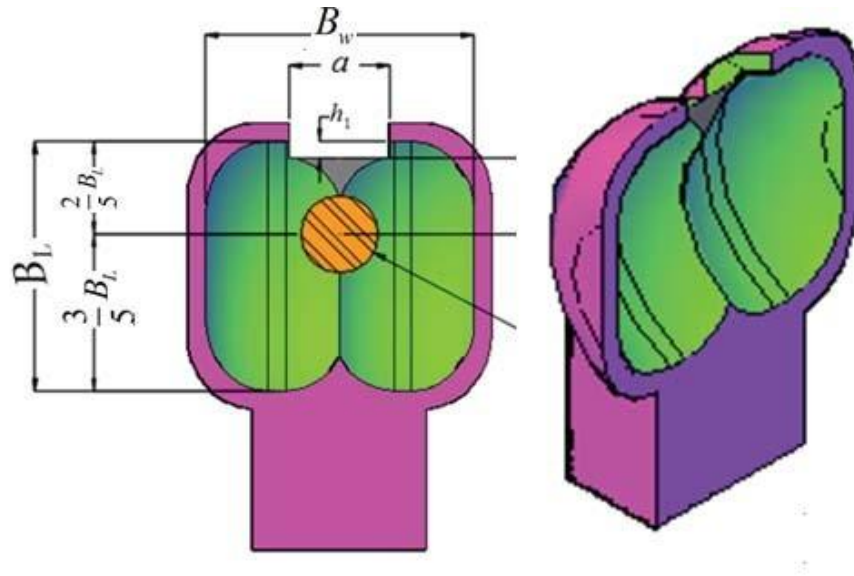
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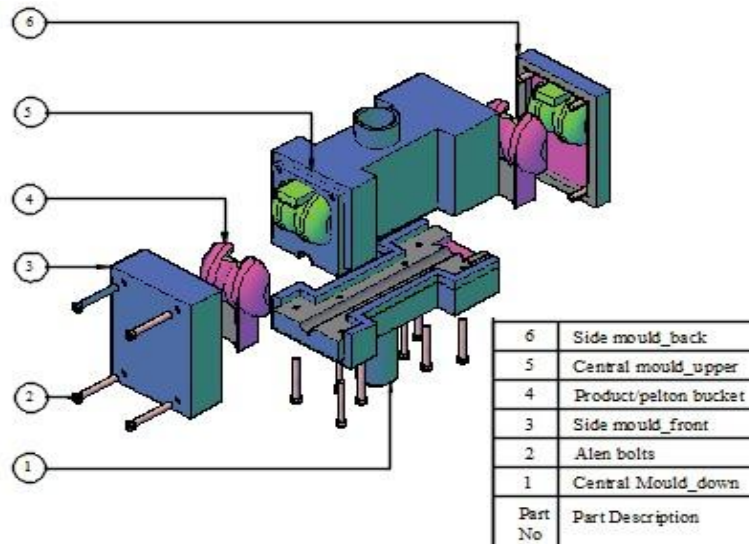
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\*UDSKLFV ([FKDQJH 6SHFLILFDWLQRV  
,\* (6ILOHV7KH&\$RIWKHPRXOGDVGHVLJQHGQGSUR  
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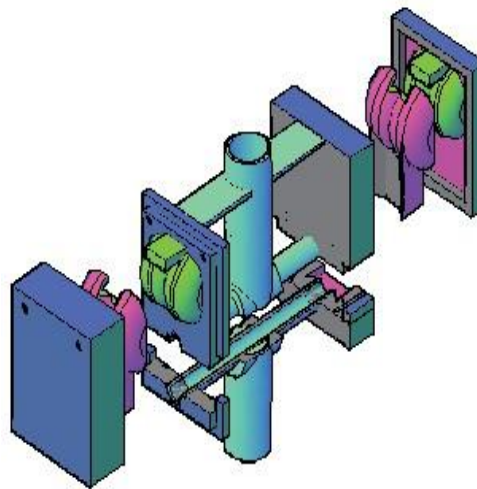
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$$\frac{7\%/(, \&+(0,\&\$&20326,7,212)7+(2+160\$7(5,\$/86(*)257+(3(721\%8\&.(7028^r}{(OHPHQW \& \quad 0Q \&U : 9}$$

*B. Centrifugal Casting of Pelton Bucket*

7KHFKHPLFDOPRPSRVLWLRQRISXVHGLVVKRZQLQ7DE DGGLWLRQ  
OH

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$$\frac{7\%/(, \&\$/2<\&+(0,\&\$&20326,7,21}{(OHPHQWV \&X 0J 0Q 6L )H \quad 7L \quad =Q \quad \$O}$$

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+H[DFKORURHWKDDQHZDZDSSOLHGDW&IRUGHJDDVVL  
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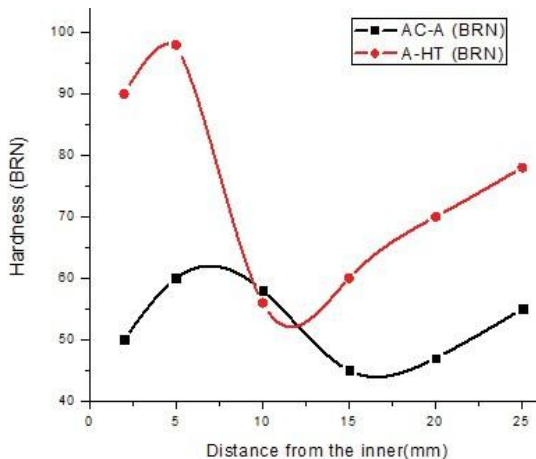
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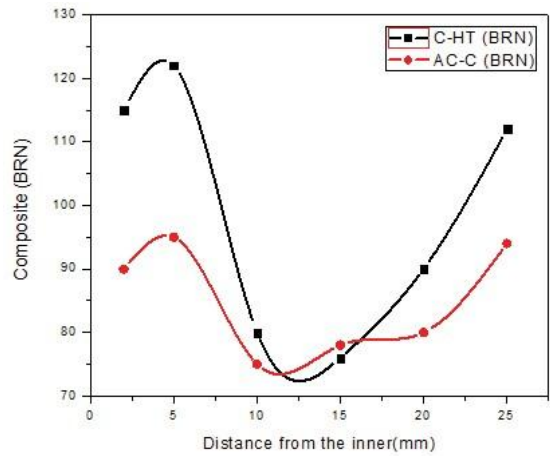


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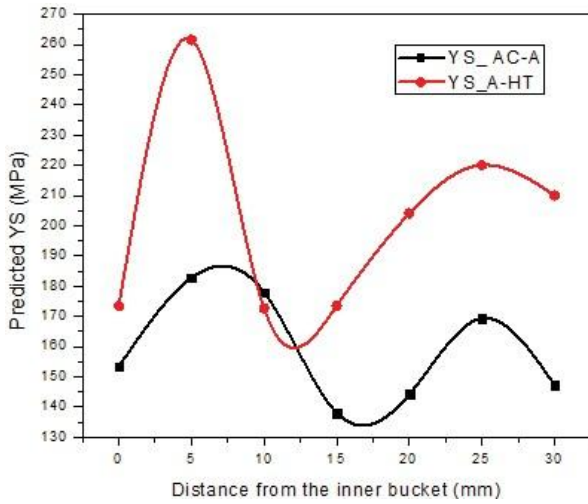
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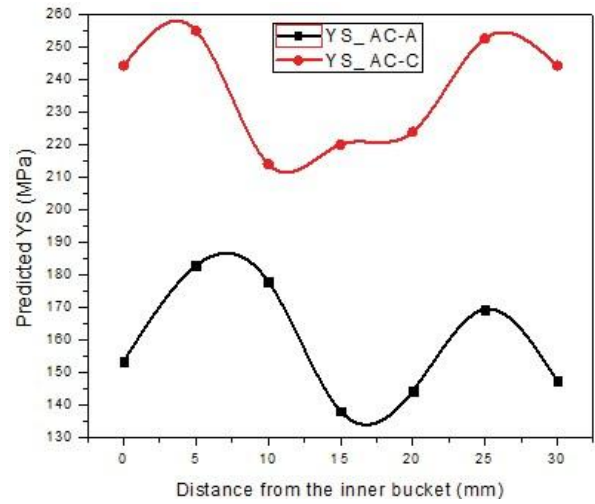
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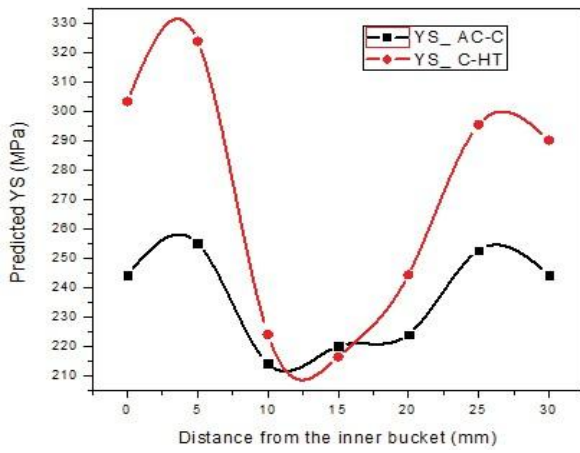
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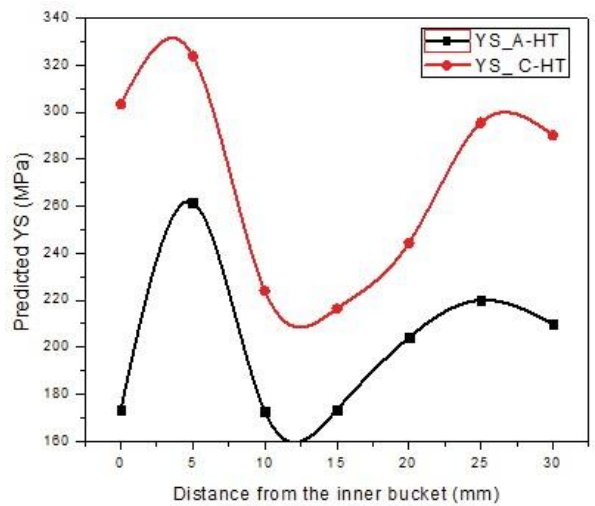
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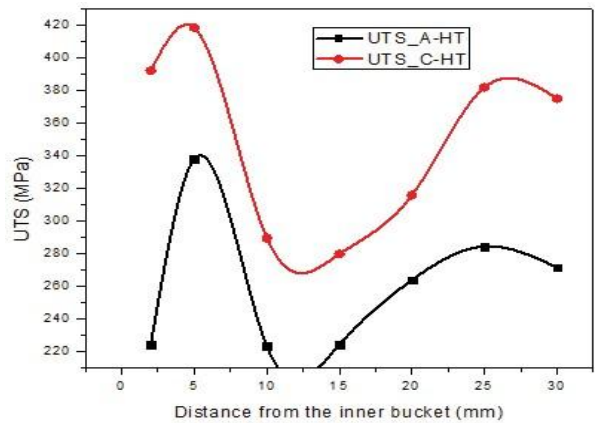
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$$YS \frac{UTS}{a-n} \exp n^{\delta/4} n_n$$

$$UTS \frac{YS n_n}{a \exp n^{\delta/4}}$$



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3LFR0LFUR+\GUR3RZHU3ODQW\$SSOLFVWLRQ *International  
Journal of Engineering and Innovative Technology (JEIT), YROSS*

1,51DYDDQG763UDVDG'HVLJQDQ6WDWLF\$QDO\VLVRI3HOWR  
Q 7XUELQH%XFNHVW *International Journal of Science Technology and  
Management, YROSS*  
\$&9LHLUD3'6HTXHLUD-5\*RPHVDQ6\$5RFKD'U'60LGLQJ  
:HDURISO\$OOR\6L&S)XQFWLRQDOO\*\UDGHG&RPSRVLWHV,QIO  
XHQFHRI 3URFHVVLRQJ&RQGLWLRQV *Wear YROSS±*  
E\ 0HDQV RI 4XDOLW\ ,QH] DQG 3UREDEOH <LHOG  
6WUHQJWK *AFS International Cast Metals Research Journal,  
YROSS*  
7RXJKQHVVLRQ\$O6LDQ6\$O6L&X&DVW\$OORV3DUW,(IIFW  
RI  
3URFHVV9DULDEOHVDQ60LFURVWUXFWXUH *International  
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SS

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7KLVVWXG\FRQFOXGHVWKDW  
L 7RJHQXLQHO\WXUQDURXQGWKHSUHQQLDOSR  
ZHULVXHVLRQ  
66\$SRZHUVRXOGEHJHQHUDWHGIURPWKHDEXQ  
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DSSOLFVWLRQ RI LQGLJHQRXV  
WHFKQRORJ\DQGPDWLUDOV  
LL 8VH RI FHQWULIXJDO FVWLQJ PHWKRQ DQG  
KHDW WUHDWPHQW  
LPSURYHGKHPFKDQLFDOSURSHUWLHVRIWK  
H\$DOOR\DQG \$6L&s FRPSRVLWH PDNLQJ WKHP  
PRUH VXLWDEOH IRU  
3HOWRQEXFNHW\$SSOLFVWLRQ  
LLL +HDWWUHDWHG\$DOOR\DQGS6L&sFRPSRVLWHZL  
OO EH VXLWDEOH IRU WXUELQH PDWHULDQV  
IRU D ZDWHU VWRUDJH  
WXUELQH\VVHP7KLVLVGXHWRWKHPQLPDOS  
HUFHQWJHRI VLOW LQ WKH VWRUHG ZDWHU  
DQG WKH HQKDQFHG FRUURVLRQ DQG  
ZHUUHVLRQDQFH SURSHUWLHVRIWKHPDWHU  
LDQV  
LY 7R IXUWKHU LPSURYH WKH OLIH VSDQ RI WKH  
EXFNHW KDUG  
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