

zenoLINK



welch-e technologies

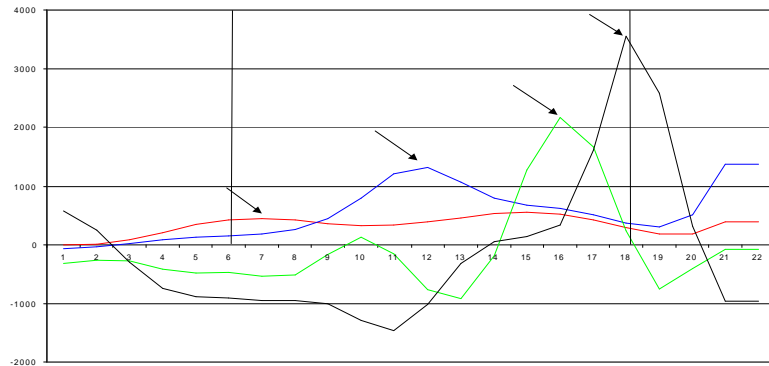
Quick Look

SM



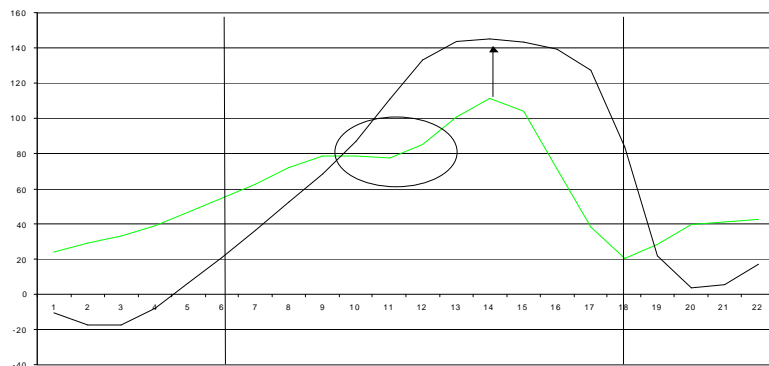
The Kinetic Link

The generation of distal end implement speed through the conservation of momentum of a system of body segments and muscular links.



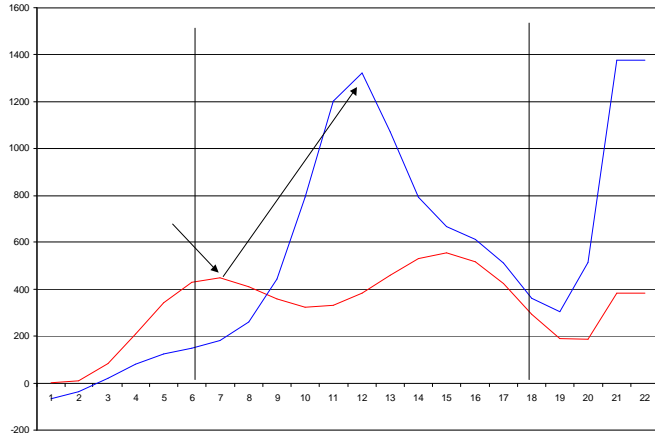
Muscular Loading

Utilization of the stretch-shorten cycle to enhance concentric muscle action and work output.



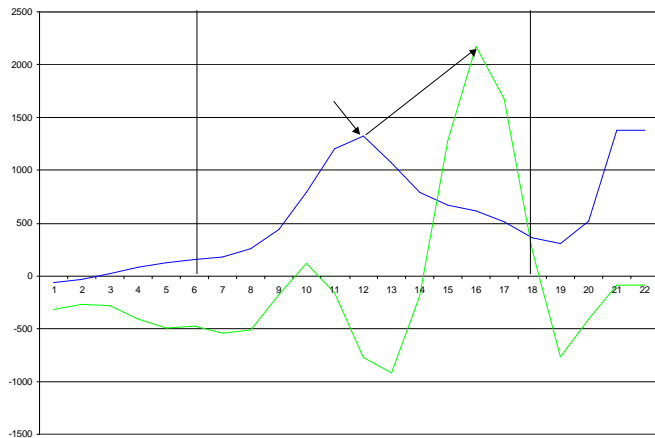
KINETIC LINK

Generation of extremity speed through the conservation of momentum.



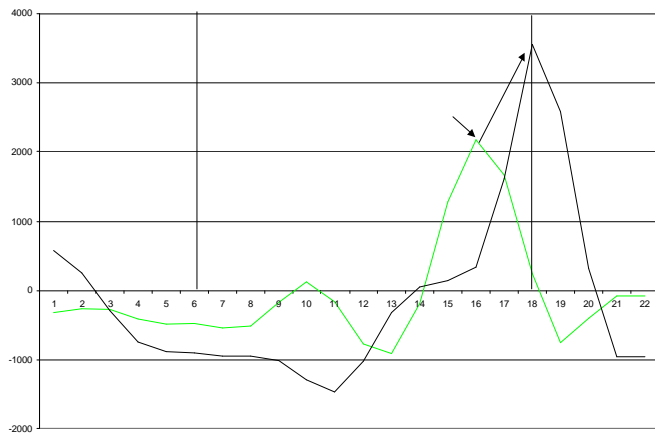
HIPS TO SHOULDERS KINETIC LINK COORDINATION

Peak Hips Segment Speed	449
Acceleration	53
Deceleration	46
Power Ratio	175



SHOULDERS TO ELBOW EXT. KINETIC LINK COORDINATION

Peak Shldr Segment Speed	1322
Acceleration	264
Deceleration	264
Power Ratio	212

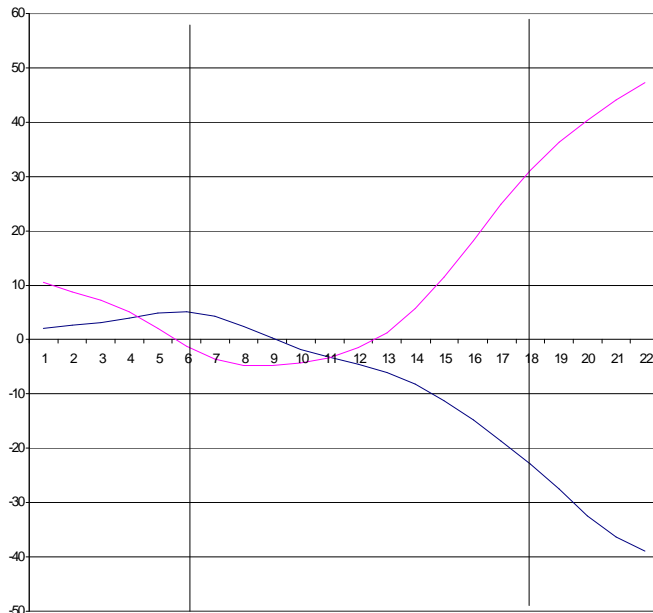
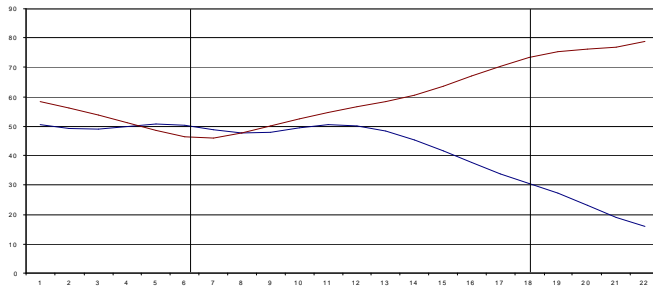
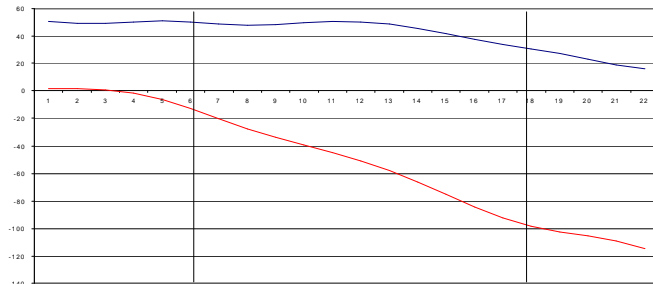
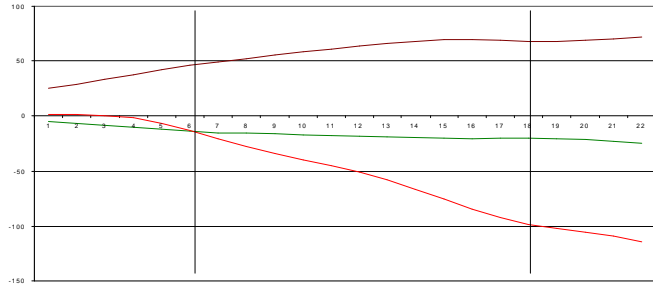


ELBOW EXT. / SHLDR INT ROT KINETIC LINK COORDINATION

Peak Elbow Ext. Speed	2169
Acceleration	1181
Deceleration	964
Power Ratio	689
Peak Shldr Int. Rot. Speed	3547

STABILITY

The ability to create and maintain a platform for dynamic movement.



LOWER BODY STABILITY

Hip Rotation vs. Linear Displacement

Hip Rotation vs. Plant Knee Flx/Ext

Plant Knee and Hip Flx/Ext

Hip Rotation at FC

-13

Rate of Knee Flx at FC

0

Total Knee Flx FC - BR

-16

Rate of Hip Flx at FC

2

Total Hip Flx FC - BR

24

Rate of Displ. at FC

3.01

Total Displ. FC - BR

2296

Stride Length (%leglnth)

149

Stride Direction

-10

TRUNK STABILITY

Flexion/Extension and Lateral Bending

Trunk Flexion at FC

-1

Rate of Trunk Flx at FC

0

Total Trnk Flx FC - BR

26

Lateral Bending at FC

5

Rate of Lat. Bnd at FC

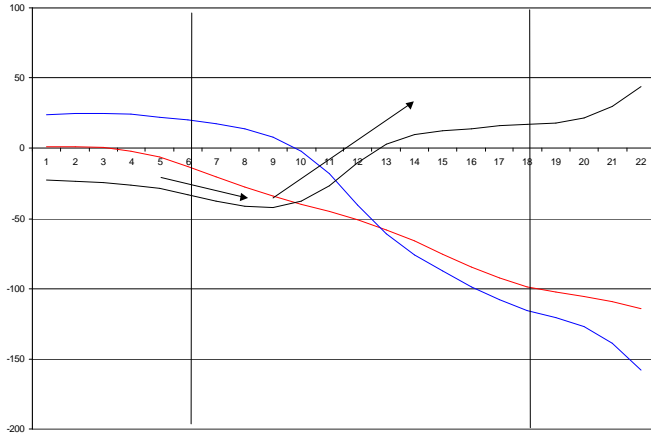
-2

Total Lat. Bnd FC - BR

-24

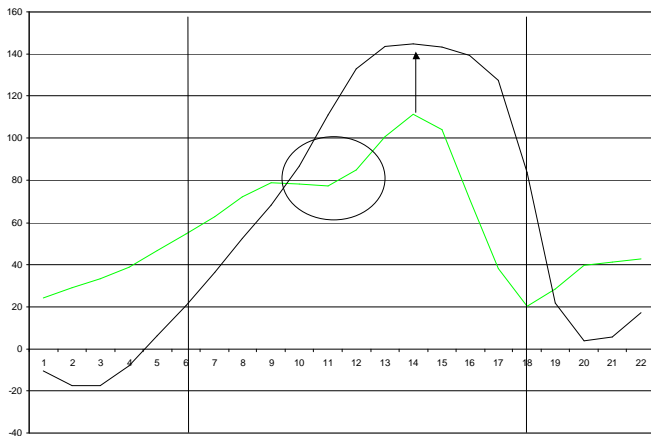
MUSCULAR LOADING

Utilization of the stretch-shorten cycle to enhance power output.



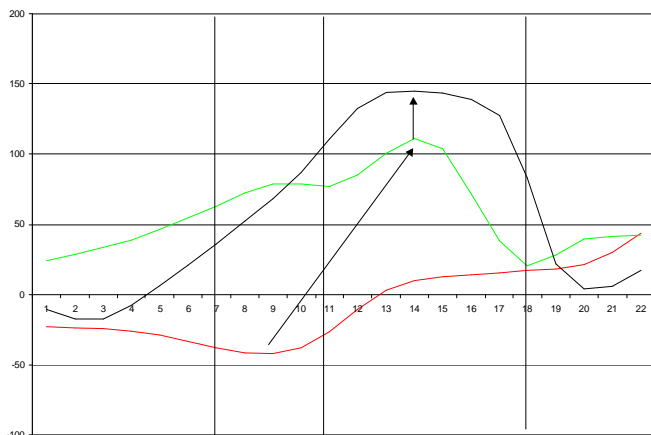
TORSO LOADING SSC BETWEEN HIP/SHLDRS

Maximum Separation	-42
Rate of Stretch	3.04
Rate of Shorten	10.58



THROWING ARM/SHOULDER SSC OF THE SHLDR/EXTREMITY

Maximum Shoulder External Rotation	145
Rate of Stretch	11.37
Rate of Shorten	5.87
Maximum Elbow Flexion	111
Rate of Stretch	11.36
Rate of Shorten	24.38

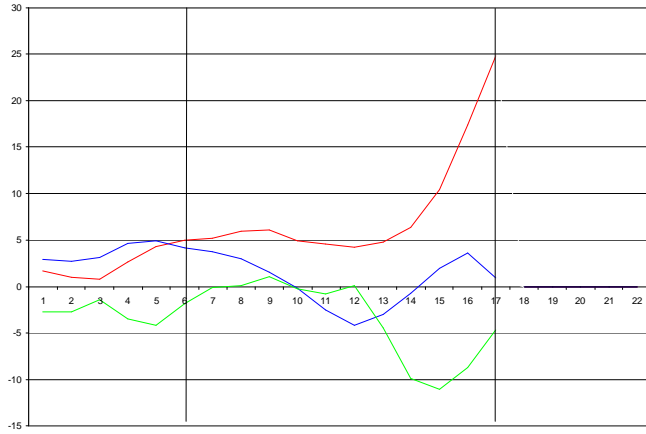


LOADING SEQUENCE COORDINATION

Point of Max Torso Stretch	8
Point of Max Triceps Stretch	3
Point of Max Shoulder Stretch	3

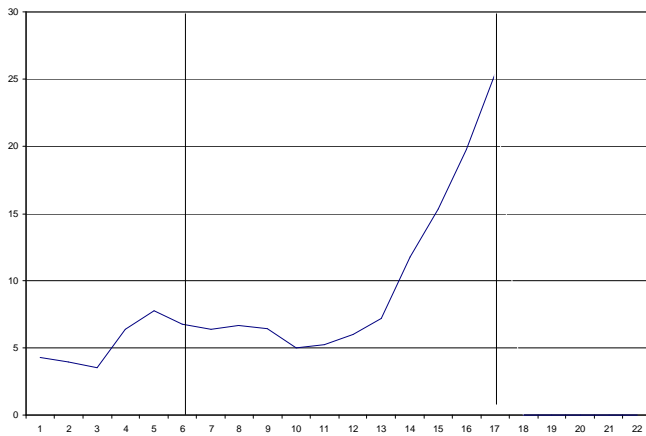
BALL SPEED

The resultant effect of body movement on ball speed and trajectory.



BALL in THROWING ARM/HAND
3-D VELOCITY TRAJECTORY

X component	<input type="text" value="25"/>
Y component	<input type="text" value="1"/>
Z component	<input type="text" value="-5"/>



BALL in THROWING ARM/HAND
RESULTANT SPEED

Release Speed	<input type="text" value="25"/>
Acceleration to Release	<input type="text" value="5"/>