

CHAPTER 53 NEWSLETTER

September 2023 Kennewick



Editor: Dennis Armstrong daa3@msn.com

[Next Meeting](#) [The details:](#)

[Sunday](#)

September 17, 2023

Time: 11:00 AM

[Location:](#)

Applebee's Restaurant

606 North Columbia Center Boulevard
Kennewick, Washington

Lunch at noon - Individual order from menu

Need directions - please let me know



Please RSVP before Sept 15

by email to Dennis Armstrong
at daa3@msn.com
or call to 509-430-5304

Mart will begin at 11:00 AM

Bring some stuff for a super trading session.

MASKS = Optional

Lunch at noon - Individual order from menu

Pay Dues

for 2023 & 2024

Still only **\$7.00** per year

Mail to: Dennis Armstrong
1610 Johnston Ave.
Richland, Washington 99354

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Please visit our Chapter web page:
<https://new.nawcc.org/index.php/chapter-53-inland-empire>

[Help our Chapter Grow](#)

Bring a guest to the next meeting.

[Program for September 17:](#)

[We have ordered three DVD's](#) – will do a popularity vote at the meeting on which to show.

** The Vintage Wrist Chronograph

** Waltham's American Watch Co. Grade: 40 Years of Excellence

** Treasures of the American Clock and Watch Museum: Keynote Lecture, Walking Tour of the Exhibit and Video of the Exhibit.



Sharing letter is

"E"

Bring your "E" item and share.

Let's be innovative in bringing some horological "E" things.

members are also welcome to bring

[Special or Mystery Tools](#)

Or some other neat thing - to show and share.

[September E Tech Topics:](#)

A metal alloy named **Elvinar**, consisting of 59% iron, 36% nickel, and 5% chromium is notable for its uniquely low coefficient of thermal expansion.

An earlier similar alloy, Invar, is a nickel-iron alloy of 64% Iron and 36% Nickel, The name is a contraction of the French *élasticité invariable* (elastically invariable).

The name *Invar* comes from the word *invariable*, referring to its relative lack of expansion or contraction with temperature changes.

Both were invented in the late 1890s by Charles Édouard Guillaume, a Swiss physicist.. Guillaume won the 1920 Nobel Prize in Physics for these discoveries, which indicates how important these alloys were for scientific instruments.

The largest use of both Invar and Elinvar was in balance springs for mechanical watches and chronometers. A major cause of inaccuracy in watches and clocks was that ordinary steels used in springs lost elasticity slightly as the temperature increased, so the balance wheel would oscillate more slowly back and forth, and the clock would lose time.

Prior to these metals, chronometers and precision watches required complex temperature-compensated balance wheels for accurate timekeeping. Springs made of Elinvar, and other low temperature coefficient alloys that followed, were not affected by temperature, so they made the temperature-compensated balance wheel obsolete.

Elasticity is the ability of a body to resist a distorting influence and to return to its original size and shape when that influence or force is removed. Solid objects will deform when adequate forces are applied on them. In engineering, the amount of elasticity of a material is determined by two types of material parameters. The first type of material parameter is called a **modulus**, which measures the amount of force per unit area needed to achieve a given amount of deformation. The second type of parameter measures the **elastic limit**, the maximum stress that can be present in a material before the onset of permanent deformation.

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We need your ideas for future programs and meeting venues. Contact any of your officers.

Get Featured

Each of us has something to share - Please consider volunteering to do a short "Tech Talk" at a future meeting.

Fall 2023 Meeting Schedule

October 8, 2023 (Sunday)
Spokane – Darcy's – Letter F

October 28, 2023 (Saturday)
Kennewick – Applebee's – Letter G

May 2024 – Regional hosted by Chapter 135 to be held at the Clackamas Monarch hotel.

Please confirm before traveling

The Inland Empire Chapter 53 of NAWCC covers Eastern Washington State, Northern Idaho and Northeastern Oregon. Meetings rotate between Spokane and the Tri-Cities.

Wear your Badge to every meeting

Need one?? - Simply order at the next meeting.

Pin Back is \$9.00 or

get the new Magnet Back style for \$11.00.

Your Chapter 53 Officers:

President: **Walt Swita**
sue_sammy51@hotmail.com

Vice President: **Phil Matson**
pmimnewlife@hotmail.com

Secretary / Treasurer: **Dennis Armstrong**
daa3@msn.com