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Measurement of rf discharge power VALERY GODYAK, Retired — h $-abstract-$\pard Discharge power is one of important parameter characterizing the discharge condition, but in the majority of published experimental works on rf plasma, the discharge power remained undefined. In these works, the power transmitted from the power source to matching network and then to antenna inductor of ICP, or to rf electrodes of CCP is considered as the discharge power. Such approach neglects rf power losses in the matcher network, antenna coil and that due to eddy currents induced in the ICP metal chamber and nearby conductors. As was proven in many experiments, the discharge power (one absorbed by plasma) is less (and sometimes, much less) and is not proportional to the power consumed from the power source. The techniques for correct measurement of discharge power in CCP and ICP, and methods for evaluation of power loss in the matcher, antenna and surrounding conductors will be discussed in this presentation.\fs20 \pard-/abstract-\

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